

RURAL  
WORLD

DEVOTED TO

AGRICULTURE

HORTICULTURE

HORSES

CATTLE

SHEEP

SWINE

ETC.

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## COLMAN'S RURAL WORLD.

HONORARY J. COLMAN,  
LEVI CHURCH, EDITORS.

Published every Wednesday, in Chemical building, corner of Eighth and Olive streets, St. Louis, Mo., at one dollar per year. Eastern office, Chalmers D. Colman, 630 Temple Court, New York City. Advertisers will find the RURAL WORLD the best advertising medium of its class in the United States. Address all letters to COLMAN'S RURAL WORLD, Chemical Building, St. Louis, Mo.

Subscribers must bear in mind that the subscription price of the RURAL WORLD is one dollar a year, and that we do not receive single subscriptions for a less sum, but in our constant effort to enlarge our circulation, we do allow old subscribers to take actually NEW subscribers at the fifty-cent rate, adding a new name for their own for one dollar, and other new names at fifty cents each, but in no case do we accept two OLD subscribers for one dollar. We are willing to make a loss on a new subscriber the first year, believing he will find the RURAL WORLD indispensable ever after. We also send the RURAL WORLD in conjunction with either the twice-a-week St. Louis "Republic" or the twice-a-week "Globe-Democrat" for one dollar and fifty cents a year, and new subscribers may be added at the fifty-cent rate. Published at this remarkably low price—at less than actual cost—all subscribers must see the necessity of our dropping from our subscription list every name as soon as the year paid for expires. Thus if, on the printed slip on each paper you see John Jones, Nov. 31, it indicates that the name will drop from the list at the end of November, and if he wishes to continue to receive it, he must renew his subscription. If he would do it a week or two in advance, it would save us the trouble of taking his name off the list and again putting it in type, when he renewed, which frequently causes mistakes. This is the season to push the good work of getting new subscribers. Show your neighbors a copy of the RURAL WORLD, call their attention to the large amount of fresh, original, entertaining and instructive reading matter contained in each issue; tell them of our large number of intelligent correspondents, and how highly you appreciate its weekly visits and of the low cost at which it can be received. If our readers will spend but a portion of one or two days in enlisting in this work they can easily add more than fifty thousand new names before the first of January! Who will engage in this work? Will not each reader, male and female, young and old, go into the field at once and see how much he can do to help not only the farmer, but the cause of progressive agriculture?

## MEETING OF STATE INDUSTRIAL ASSOCIATIONS.

This meeting will be held December 10-15, in Chillicothe, Mo. The Swine Breeders', Improved Stock Breeders', Horse Breeders' and Road Improvement Associations, and the State Poultry Association, and the State Grange, and representatives from the State Horticultural Society and State Dairy Association, will participate in this meeting. It will be thus seen that all agricultural lines are to have a hearing. This assembly will be of great importance to Missouri farmers. If possible try to spend at least one day at the meeting. If unable to go, get the earliest possible reports of these various associations. These reports are for interested parties. The asking for them will show a demand for them, and will be a stimulus to do better work. Soon interest in reports will induce you to go in person, and good will come from rubbing against the farmers from different sections of the State. If you think you are not interested, you should be.

## HON. CLEM. STUDEBAKER DEAD.

Mr. Studebaker died at his home, South Bend, Ind., November 27. He is best known to the farmers of the country by the famous Studebaker wagons, the making of which he had developed from very small beginnings to the present gigantic proportions of the business.

Clement Studebaker was born in Adams County, Pa., March 12, 1831. When he was four years old his family moved to Wayne, near Ashland County, O. His father, John Studebaker, was a blacksmith and wagon maker. In 1859 Clem. Studebaker moved to South Bend, where he taught school during the winter of 1860-61. The next spring he secured employment in the blacksmith department of a company manufacturing threshing machines, receiving his board and 50 cents a day. When he first reached South Bend his cash capital was \$2. By careful saving, in February, 1862, he was able to start in the blacksmith business with an older brother, Henry. Their stock consisted

of two sets of blacksmith tools and \$68 in cash. A government contract for a hundred wagons was secured, and was executed to the entire satisfaction of the government. This gave the young firm a start and from that time it grew until it has attained its present financial success.

## ECONOMY OF DRY WOOD.

Nothing is more exasperating to a woman than burning wet, soggy wood. On a cold morning to have the house filled with smoke instead of heat sets all things wrong. Then many a loaf of bread is indigestible and unwholesome because the wood was green and wouldn't enable the cook to control the heat of the oven, giving too slow a fire, and then, when not required, too hot a fire. These are phases of burning green wood with which the most of the farmers' wives are only too familiar.

Green wood is 50 per cent heavier than dry wood because of the excess of moisture. This of course increases the expense of hauling, if green rather than dry wood is used, for only half as much of the green wood can be hauled on a load as of dry wood. Don't argue that the horses, boys and yourself are not very busy and your time and labor don't count. Such logic added to rooms filled with smoke is what will leave you in old age alone on the farm. Time and muscle are many times the farmer's only capital and should never be unwisely expended.

Then, aside from increased expense in hauling, 50 per cent of the heat is consumed in evaporating the water in the green wood. Now figure how much more swinging of the ax is necessary if you have provided green wood for fuel this winter. It takes good business plus a knowledge of farm economics to cut wood and cord it up to dry out for another season's use. This is another evidence that energy and knowledge are as large factors in success on the farm as in other lines.

## BRINGING UP WORN SOIL.

No subject is so full of interest to an intelligent farmer as building up worn out land. He knows that the system of always taking from the soil and never giving back will eventually bankrupt a farmer. The successful farmer to-day considers the feeding of his farm as important as the feeding of his stock. He knows that paying stock must be fed and judiciously fed. It is just as important to feed the farm.

This is the time when the subject can be given study. The value of clover as a renovating crop has been widely discussed. The difficulty of getting a stand of clover in some sections has led many to abandon this fertilizing agency. Now, instead of abandoning clover, make investigation as to how to get a good growth of clover. If one man has been successful; another may be. Then, cow peas have been and still are the hope of the southern farmer. In this section they are said in the experimental stage as far as the average farmer is concerned. The experiment stations have proved their value. When these western prairies were first occupied large crops were the rule. But for centuries they had been enriched by the decaying vegetable matter and the soil was full of humus. Man in his greed drove on this year after year and gave nothing in return, and now he calls the soil worn out. Try Nature's plan. The entire farm may not be brought to a high state of fertility in one year after being depleted of its humus for decades after decades, but by care and intelligence a poor farm may be made to yield abundant harvests. To make two blades of grass grow where one grew before requires knowledge and skill that comes only from study and experimentation.

## PRESERVATION OF FENCE POSTS.

There have been directions upon directions given for preserving different kinds of wood to be used as fence posts. A farmer recently gave the following method of preserving basswood for posts, stating that if properly done the posts would last a lifetime. Take the bark from the posts; let them stand in the sun a few days so the outside will dry. Have a brick fire and put each post in; keep turning until each post is lightly charred all around. Now have a trough the length of the posts with raw linseed oil in it. Into this stir pulverized charcoal until the mixture is the consistency of paint. Put every post in this mixture and turn slowly. After being treated let the posts dry thoroughly before being put in the ground. This farmer stated that one kind of timber is just as good as another when treated in this way.

Then all farmers have heard of the coal tar treatment of posts to preserve them. In spite of all these time-honored practices, Mr. J. H. Creighton, of Ohio, makes the following statement:

"The preservation of wood by saturation with creosote has been tried in various experiments. Perhaps if the intercellular spaces could be filled with some antiseptic substance,

the wood might be preserved, but this is difficult and expensive. Many times the papers have published that coal tar would preserve posts in the ground. But many failures prove the statements to be misleading. I have known long lines of fence posts treated with coal tar, but really they seemed to rot quicker than those not treated with it. I think it very doubtful if the application of coal tar and rosin will be successful.

If a remedy should be found, it would be many years before it could be proven. Much waste of time and expense should make us slow to trust a theory. The better way is to rely on such kinds of wood as we know to be durable."

If the labor of thus preparing post is useless, why continue the practice? If the railroads knew of any effective method of preserving wood, they most assuredly would use it to make the railroad ties more lasting. It is well for farmers to get the most reliable facts regarding treating posts for lengthening their life before expending labor and money in an effort which may be a futile one. The experiences and observations of our readers along this line will be interesting and instructive.

## WHOM IGNORANCE AFFECTS.

What ignorance costs the individual who lacks the knowledge he ought to possess is often commented upon; but we do not always appreciate how far-reaching the effect of that ignorance may be. In a recent issue of the RURAL WORLD a correspondent (E. W. Geer, Nov. 27, page three) told of the effect on the grape market by neighbors offering their product at too low prices. "People not accustomed to selling fruit would take any price offered them, and we had this to contend with," says Mr. Geer.

In the very able paper on "The Dairyman's Accounts" that appears on this page, by Mr. H. A. Bereman, this thought again confronts us.

If a farmer, by not knowing what his produce costs him, sells it at a price that is equal to or below cost of production, he is not only cheating himself, but is breaking down the market for other producers. We, of course, know that there are times and circumstances when simply knowing the cost of production will not enable the producer to get a price for his wheat, his hogs, or his butter that will return to him the cost of production and a reasonable profit. We know, too, that the price at which a product sells does not always include all of the return. It costs me just what I get for it, and no amount of fingerin' will make it cost any less or bring any more." You may know this fellow. He doesn't attend dairy conventions or read dairy literature and he is sitting on the tail of progress cussing the monopolists and refusing to be enlightened. You may think he doesn't concern you, but he does. He competes with intelligent, progressive citizenship that asks more than a mere existence. You who want a profit in your business to procure some of the luxuries of life, a piano or a trip to the Louisiana Purchase Fair in 1903—who wish to educate your children and lay by a fund for old age, must compete with this unreflexive, non-fingerin' plodder, who accepts his lot of unremitting toil and hardship with grumbling and repining, but rarely tries to improve. It is our duty to educate him out of his rut whenever possible; to bring him to a proper realization of his obligations, his needs and his relations to the rest of mankind.

No successful merchant or manufacturer ever guided the ship of his commercial interests to a safe harbor without a proper understanding of the details of his business, and the main fact was not the competition he had to meet, but the cost of production, and how that cost could be reduced and the quality and output of his goods increased. This process seems so reasonable and necessary as to be considered almost as a matter of course.

But how many farmers observe any system of regularity in the management of their accounts.

You may think it is a simple matter to put down on one page of a book a record of all the cash taken in during the year, and on another page an account of all cash paid out, and that the difference will represent the loss or gain for the year; but this is not all. You would not undertake to determine your average daily earnings by any one day's transactions, nor does any one year's business represent the average yearly conditions.

Only by a lifetime of effort can we determine the net result of our achievement, and having but one life to live, we may not wait to judge. We must anticipate as far as possible. As the germ of the contains in embryo all the fulfillment of the perfect flower, so should there exist in our minds the whole plan of our future work. It is to enable us to wisely anticipate that I make these few suggestions.

Now, how many of us know exactly how much a pound of milk or butter costs? I may as well tell you right here what got me started on this question, and the reason for existence of this paper.

It is not a fascinating subject. It is not even a pleasant one. I defy any of you to make a pretty story out of the cold matter of fact topic of accounts. I would much rather talk about silos or the Groot bill, and I got so excited over Mr. Groot's story about alfalfa in a recent issue of "Hoard's Dairyman," that I sat up till very undearlymanlike hours one night making an estimate of what wonderful things I could do in the milk business when I got a farm of my own, and I could seed every available spot to alfalfa. Just now I am living on a hundred-acre farm that is valued at \$2,000 an acre, and about the time I got my alfalfa field well established, a row of yellow brick flats would be built across it, and a trolley car would be smashing my silo into smithereens.

But I must get back to my figures even if I can't make an interesting talk about them. When I was a schoolboy, away back in the twenties, we used to sing the multiplication table to the tune of Yankee Doodle. Now, if we could just keep books in ragtime, I am sure much of the distaste many good people have for accounts would vanish. Anyway, it was the synecopated epistles that numerous intelligent dairymen have written to various agricultural papers that started me off in this bookkeeping trade.

It was the vague awhile back to write a sketch of "How I run my dairy farm," and send it to the dairy papers for publication. Most of them were interesting and all could have been instructive if they had not left so much unsaid. One man seemed to think the only item of cost was what he paid out for hired help. Nearly all omitted one or two facts, which, in the course of years, must be accounted for.

## THE DAIRYMAN'S ACCOUNTS.

Read by H. A. Bereman at the State Dairy Meeting at Palmyra, Mo., Nov. 5.

It is with no feeling of pedantry that I have written these few thoughts on the subject of the Dairyman's accounts, but entirely in the spirit of inquiry and suggestion.

While health is perhaps the greatest blessing of life, are we in business for that purpose exclusively?

If the prime object of every business man is to make his business pay, is it not his first duty to know exactly what he is doing?

A friend of mine once smiled at my careful system of household accounts and said: "I know exactly what it costs me to live, and I don't keep any expense book either." When I asked about his method he replied: "My salary is \$2,000 a year, and my annual expenses amount to exactly \$2,000."

That system is all right for the man who wants that sort of a system, but it shows neither economy nor prudence.

I have observed that one of the surest roads to economy (in its broad sense—which means judicious expenditure and not parsimony) begins with the keeping of an itemized expense account.

Just as statistics on any subject form the basis for an intelligent conception of the subject, so does keeping accurate account of money transactions enable one to regulate expenditures with intelligence and safety. At the end of the year such records can easily be classified and the true status of each department be ascertained. Some items have cost too much, and you know where to curtail. With others you see where you could have been more liberal, and next year you govern yourself accordingly. In short, this systematic method of procedure enables you to know where you are "at" and how you got there. By this road you arrive at that most desirable of all deductions—the cost of production. I assume you know what you receive, and if you can ascertain what you pay for a pound of milk, you can easily find the profit—or other-wise.

There is a type of dairyman who does not want to know. He believes himself to be the prisoner of his environment. He struggles along with little hope and no enthusiasm, saying: "I'm in it and I can't get out. I'm getting all my stuff will bring and I ain't spending a cent more than I have to. I know what a gallon of milk costs me. It costs me just what I get for it, and no amount of fingerin' will make it cost any less or bring any more." You may know this fellow. He doesn't attend dairy conventions or read dairy literature and he is sitting on the tail of progress cussing the monopolists and refusing to be enlightened.

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Recently a contribution of the modest sum of \$5,000 was received, and a few days ago \$18,000.00 was received by the Treasury Department from some unknown individual who claimed that he owed the Government, and that, as he was wrongfully retaining the amount, his conscience troubled him to such an extent that he desired to make restitution. These sums received almost daily amount from a few dollars up in the thousands. In 1911 an account was opened by the Register of the Treasury to record the funds thus sent, and up to June 30, 1901, the considerable sum had swelled to the aggregate amount of \$12,197.81.

Doubtless the contributors of these sums consider that they have in a measure repaired the wrong that has caused them much remorse. What a glorious old world this would be if some people who owe debts to their neighbors would become conscience-stricken and would liquidate their indebtedness. Good times would truly be with us, and many a home would be brighter for having received its just dues. The accumulation of wealth to be properly used is a laudable ambition, but not at the expense of other man's generosity or misfortune. "A good name is rather to be chosen than great riches," is as true to-day as it was when first written, and doubtless those who have contributed to the conscience fund realize this fact, and say with Shakespeare, that—

"If thou'rt rich, thou'rt poor;  
For like an ass whose back with ingots bows,  
Thou bearest thy heavy riches but a journey,  
And Death unloads thee!"  
Nov. 24. S. F. GILLESPIE.

## PEBBLES FROM THE POTOMAC.

Editor RURAL WORLD: The preliminary report of the manufacturing industries of North Carolina says that over \$76,000,000 are represented in the manufacturing industries of that State. The annual wages of those employed in the various manufacturing concerns amount to nearly \$14,000,000; number of employees, 70,000; cost of material used, \$33,073,388.

NATIONAL GRANGE—A dispatch dated at Boston conveys the intelligence that "The National Grange's report on legislative business takes a decided stand on nearly every matter that may come before Congress, declaring among other things, for more rural free delivery, postal savings banks, higher tax on oleomargarine, the Nicaragua Canal, and opposing ship subsidies and national irrigation in the west. It also demands that Speaker Henderson change his committee on agriculture."

From the contents of the dispatch we are led to believe that the National Grange has planned a program that will keep the organization from going to sleep during the next session. We are of the opinion, however, that no appreciable progress can be made by endeavoring to accomplish too many changes at any one session. It is obvious to the careful observer that a concerted action on any one legislative question is a task quite sufficient for the energies of those seeking effective legislation or the enactment of a new law. To break a bundle of sticks at once is a task near impossible; to break one stick at a time simplifies the task and accomplishes the successful conclusions desired. However, we wish the Grange abundant success in quite a number of the innovations contemplated.

THE CENSUS.—Perhaps few people are aware of the cost of taking the census of the United States. The census just completed will cost the Government close in the neighborhood of \$10,000,000. It is a growing sentiment that a permanent census bureau be maintained by the Government, thereby obviating much of the expense incident to organizing a new census at the beginning of every ten years. This method would doubtless prove more efficient and keep census affairs up to date. Many commendable reasons are advanced in favor of a permanent census bureau.

GOOD GROWTH.—It is said that Postmaster-General Smith will ask Congress to appropriate \$50,000,000 to cover the expenses of conducting the free rural mail delivery for the next fiscal year. This means that this branch of our mail system has grown to such enormous proportions as to necessitate an amount almost double that of last year. This service has increased the sale of postage stamps to such a large extent that the system has been found to cost but little more than the old. The result of the operation of this system has surpassed the expectations of even the most sanguine. When Congress, in 1894, consented to give this experiment a trial, many predicted the scheme impracticable, but results have demonstrated the contrary.

REVENUES.—The Commissioner of Internal Revenue has just issued his annual report. It may, perhaps, be of interest to the multitude of readers of this publication to know what articles have contributed materially to the money-box of the Treasury of the Government. The total receipts for the fiscal year ending June 30, 1901, were \$308,871,599. Among some of the items that were contributions in producing the total of this enormous sum, we find that spirits contributed \$116,007,979; tobacco, \$62,431,907; oleomargarine, \$2,513,101, a decrease of \$25,000; documentary and proprietary stamps, \$1,723,323; filled cheese, \$14,625; mixed flour, \$4,000.

CONSCIENCE FUND.—We dare say, few are aware that what is called a "conscience fund" plays a more or less important part in our governmental affairs.

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## STODDARD CO. (MO.) NOTES.

Editor RURAL WORLD: We are having it very dry yet, and our wheat is needing rain very much. We had some rain early in November, but not enough to make stock water in ponds and branches. Almost all stock is watered from cisterns, wells and springs.

Stoddard County has made one-fourth of a corn crop, and of very inferior quality. The cow pea hay crop sown after wheat is almost an entire failure on account of so much dry weather and late sowing of seed. W. L. Garner sowed five acres of cow peas Aug. 3-5. The writer sowed 29 acres Aug. 6-7; 13½ acres Aug. 8-9 and 12, and seven acres Aug. 16-18. You see that there were several days' difference in the sowings. The last field had rain, so much that plowed ground was too wet to work on top. On account of the dry weather we failed for the most part to get a good stand. The weather continued dry up until our peas on ridge land were killed by frost, which occurred the first of November. They grew very slowly, but we watched them very closely all the time.

The field sown by W. L. Garner showed bloom Sept. 23, and the first field sown by the writer showed bloom Sept. 29. If rain had been as plentiful as common we would have had a fair crop. The peas bloomed quite well and there were some pods about grown, but the vines were so short, we did not cut any of them. We disc-harrowed the ground and put in wheat with disc-drill, and this wheat is making a reasonable growth compared with other wheat.

I attended a farmers' institute and heard the feeding value of hay for fattening purposes discussed, and found that pea hay was among the best, if not the best for feeding cattle; that being the case, the pea hay will benefit the farmers in this section a great deal.

Last winter I went to Sikeston, Mo., on business. While there I met a cattle feeder who feeds extensively, and he said cow pea hay was all right. He lives and feeds in a cow pea hay country. I am satisfied that he knew what he was talking about.

Wheat is 50c per bushel; corn, 60c; oats, 45c; Irish potatoes, none in the county; sweet potatoes, \$1 per bushel; apples, 1c; turnips, 13c; wheat bran, \$19 per ton; cotton seed, \$14; our best hogs, 50c per lb.; cattle for butcher, 2c to 3c; good milk cows, \$15 to \$20. Calves are higher accordingly than any other cattle. They are being bought to pasture the wheat fields.

## MISSOURI WEATHER AND CROPS.

The U. S. Department of Agriculture Climate and Crop Bulletin of the Weather Bureau, Missouri Section, for the month of November, 1901, is as follows:

The exceptionally pleasant weather which characterized the month of October, 1901, continued throughout the month of November. There were some sharp frosts but no severe freezing weather. The mean temperature of the month differed but little from the normal, but over the greater part of the state the precipitation was deficient, many of the northern and western counties receiving less than 1 inch. The heaviest rains fell in the southern counties where, in a few localities, the total for the month ranged from 2 to 4 inches.

WHEAT—In most of the western counties wheat has made good growth and is in a very promising condition, but in nearly all of the central and eastern counties its growth has been retarded by the dry weather, and in a few counties the stand is very poor and the outlook discouraging. In general, however, the crop is looking well, considering the light rainfall. In some of the southwestern counties much

wheat has been pastured. Slight damage by fly is reported in a few counties, and worms have also caused some injury in a few of the southern counties.

CORN—Considerable corn still remains in shock in the fields, but is in good condition, except where damaged by worms in most sections the weather has been too dry for husking. Much corn has been shredded.

COTTON picking, in the southeastern counties, is practically completed.

FALL PASTURES have afforded considerable feed in portions of the western and southern sections, but over the greater portion of the state they have been very poor.

STOCK WATER is now more plentiful in some of the southern counties, but in most sections it continues very scarce. Considerable fall plowing has been done in some districts, but in many counties the ground has been too hard.

A. E. HACKETT, Section Director, Columbia, Mo., Dec. 2, 1901.

LACLEDE CO., S. CENTRAL MO.—The weather has been very favorable for the growth of wheat and pastures and all look fine. J. N. NORMAN. Nov. 30.

BENTON CO., CENTRAL MO.—Owing to the drought a large amount of rye has been sown for winter pasture. Oats and tobacco were total failures. Dec. 2. MORGAN ARMSTRONG.

HOWARD CO., CENTRAL MO.—There was quite a large acreage sown to oats, but it made no grain. The potato crop was too small to be estimated. Dec. 2. L. L. KINGSBURY.

PULASKI CO., CENTRAL MO.—Rye was sown for winter pasturage, as hay is so scarce. The weather is exceedingly fine and favorable for wheat and rye. Dec. 2. W. H. GOODMAN.

PHELPS CO., CENTRAL MO.—The unusually dry season has caused a shortage of all crops. There have been only light rains since April 17. Stock water is very scarce now. J. S. WILLIAMS. Dec. 2.

MACON CO., N. E. MO.—Oats have been almost a total failure for the past years. Wheat and rye look healthy, but have not stood out sufficiently, owing to lack of moisture. Dec. 2. TAN HOCKENSMITH.

SCOTLAND CO., N. E. MO.—Some little wheat was sown this fall. The tobacco crop was small and will be retailed out in the leaf. Hay is \$3 per ton in the stack and \$3 or \$10 delivered. Dec. 2. R. C. HOLLEY.

CASS CO., W. CENTRAL MO.—What corn was raised is of very inferior quality. Potatoes are very small. A great many have been shipped in. It has been almost too dry for wheat and rye. Nov. 30. T. S. HAYTON.

CALLAWAY CO., CENTRAL MO.—The drought still continues. Most of the farmers are out of stock water and are hauling in tanks from one mile to five. Winter wheat is drying up for want of moisture. Dec. 2. R. D. ROOD.

ST. CLAIR, WEST CENTRAL MO.—A good second crop of hay was grown, and much larger acreage of sorghum. Kaffir corn and millet were grown than usual and did fairly well; hence hay is very plentiful, much more so than usual. Dec. 2. JOSEPH N. STEPHENSON.

MORGAN CO., CENTRAL MO.—The crop of corn well short of all expectations, and the quality is very inferior. But little of it is really fit for horses, and is too light to feed hogs with good results. We have not had a good soaking rain since April 17. C. N. MITCHELL. Dec. 2.

MORGAN CO., CENTRAL MO.—Light rains have fallen, enough to germinate wheat and rye and enable them to make slow growth, but not enough to make fall pasturage to any great extent. An extra amount of rye was sown for fall pasturage. Dec. 2. R. D. EDWARDS.

COLE CO., CENTRAL MO.—The gathering of corn shows the crop to be very light. Wheat is looking pale and is thin in many places. It is still too dry, although we have occasional rains, but not enough to moisten the soil to any extent below where it is plowed. Nov. 30. HENRY B. BODE.

CARROLL CO., N. W. MO.—The corn crop will not exceed a third of an average yield this year. Potatoes were nearly a failure. There is a very poor prospect for a wheat crop, not enough moisture to hardly keep it alive. Water is very scarce in some parts of the county. Dec. 2. SILAS A. BALLARD.

PHELPS CO., CENTRAL MO.—The weather is very favorable. Stock of all kind is looking well. We have light showers occasionally, but not enough to supply water for general purposes. Ponds are still dry, wells and springs are very low and creeks barely run over the shoals. Should the weather turn cold and freeze up, what water there is, the water question would be a very serious one. Dec. 2. R. N. GOUGH.



# The Dairy

## DAIRY CONVENTION DATES.

WISCONSIN DAIRYMEN'S ASSOCIATION, Menomonie, Feb. 12-14, 1902. G. W. Burchard, Secretary, Ft. Atkinson, Wis.

## PROTEIN.

A reader writes us as follows: "In an article in the RURAL WORLD on feeding dairy cows the advice is given to feed protein as a means of increasing the milk flow. Can you tell me where this can be procured?"

Protein is not the name of a food in the sense that we use such terms as hay, corn, cotton seed meal, etc. It is rather the name of a chemical substance found in foods. We speak of a food as containing so much fat, so much starch or carbohydrate (containing carbon) substances, and so much protein. This last is also called a nitrogenous substance because its most important chemical element is nitrogen. Lean meat is composed principally of protein. Other nitrogenous substances quite similar are the white of eggs, called albumen, gluten of wheat (the gummy portion that is formed when one chews whole wheat) and casein of milk (the portion that forms the principal part of cheese).

Milk is composed of about 87 per cent of water and 13 per cent of solids, namely, fat, milk sugar, ash and the nitrogenous substances, principally casein. To produce this milk the cow must have food that contains the substances which, when food has been eaten, can be converted into milk. And this milk must be normal milk, containing, generally speaking, 87 per cent of water, 2.9 per cent of fat, 5 per cent of sugar, 7 per cent of ash and 2.4 per cent of casein and other nitrogenous substances; and the food eaten, to give good results, must contain the substances in the proportion that will enable the cow to secrete this milk. If the food given contains, for instance, an over-abundance of fat it does not mean that the milk will be that much richer in fat. The cow will use as much of the fat-forming substances of the food as will fit the needs of the case and the remainder will go to waste.

For the most part dairy cow foods are apt to be deficient in the nitrogenous substances, those from which the casein of the milk are elaborated. This is especially true of corn, which is the most common stock food in this country. It is rich in fat and other carbonaceous substances, but poor in the nitrogenous, and as it is impossible for the cow to make casein out of that portion of the food that contains no nitrogen, the quantity of milk that she can elaborate will be measured by the comparatively small quantity of nitrogenous substance, or protein, that the food contains. One can supply the required amount of protein for a large milk flow by feeding a large amount of corn, but in doing this we waste a large amount of fat and carbonaceous elements so far as milk production goes, though it may appear in part in the form of fat on the cow's body.

Such a food as corn is what is termed an unbalanced food, at least for milked cows; that is, it does not contain the nutritive substances in the proper proportion to meet the requirements of the animal; it has too much of the carbonaceous and too little of the nitrogenous substances. Other foods are out of balance the other way; that is, they have an excess of the nitrogenous substances or protein. Clover hay, cow peas, soy beans, linseed meal, cottonseed meal and gluten meal are of this class, some, like clover hay, containing a slight excess, while others, cottonseed meal for example, contain a large excess.

Now the most of the feeds at the command of the dairymen contain too little protein to meet the needs of cows giving a large flow of milk. This is true of corn, both grain and fodder—timothy hay, wheat and oat straw (very largely so) and sorghum fodder. Hence the advice is given to balance these foods by reducing the quantity of corn, we will say, to an amount that will furnish the carbonaceous substances needed, then meet the full requirements for the nitrogenous by feeding protein as found in cottonseed meal.

## THE MISSOURI DAIRY MEETING

At Palmyra, Mo., Nov. 7-9, 1901.

(Continued From Last Issue.) Following the reading of Mrs. Moore's paper (printed in the last issue of the RURAL WORLD) Mr. Rudolph Miller, proprietor of the Macon (Mo.) creamery, discussed

## THE IDEAL DAIRY COMMUNITY.

He spoke in part as follows: A few days ago I received a letter stating that they had put me down to say something about the Dairy Community. I was somewhat perplexed about it, I did not just like that idea, and had a good mind to refuse, but the thought came to me that the Bible says you must not be hearers only, but doers. I, therefore, resolved to say what I could and do my best here, because if we all refuse to do what we can, to do our best, the meeting would be a failure. Therefore, I will tell you what I think about an Ideal Dairy Community, and also about a dairy community that is not an ideal community. From my talk you will soon learn that I am not a full-blooded Missourian. But I believe I will tell you what I have seen here in Missouri first.

I was very, very much discouraged, I have only been here a year and a half. I came here to Macon, Mo., on the recommendation of the Burlington Railroad Co., came here in January a year ago, and

## King's Evil

That is Scrofula. No disease is older. No disease is really responsible for a larger mortality.

Consumption is commonly its outgrowth. There is no excuse ever for neglecting it, it makes its presence known by so many signs, among which are glandular tumors, cutaneous eruptions, inflamed eyelids, sore ears, rickets, catarrh, wasting and general debility.

John Breasley, Potter Hill, R. I., had a "large scrofulous" bunch in his neck; the little son of Mrs. Minnie Spear, Fairville, N. Y., had a "large scrofulous sore"; the little grandson of A. E. Withers, Longview, Ark., "had scrofula via eye."

They were all cured, according to voluntary testimonials, by

**Hood's Sarsaparilla** which has effected the most wonderful and permanent cures of scrofula in old and young.

saw something I had never seen before. First thing I had never seen as much milk. I saw green grass in January, and I had never seen that before, and I learned that where there is mud there is grass. Don't you know that I never saw a calf suck before I came to Missouri. The cow came in in the spring, summer time came and I expected an increase of milk, but there was no increase, the matter was the calf sucked and I sucked my finger. I do not call that an Ideal Dairy Community. I asked my dairymen, are you going to let the calf suck all the time? I want to get a little milk for the creamery. When you get your check you look at it and think the creamery is a failure; when you look at the calf it is thin, that is a failure. Let one or the other be a failure, but not both. When the cow comes in in the springtime and you let the calf suck, by the time it is springtime again the cow has eaten the calf up.

My ideal of a dairy community is one I have in mind in Illinois in the Elgin district; it is at Hebron. I went there to visit a friend of mine, he had 19 patrons in his creamery. This was in October, and he had 14,000 pounds of milk.

As a rule the farmer has not much to do in the winter time; he works hard for six or seven months, and what he makes in the summer he eats up in the winter. If you have your cows come in in the fall, you have all kind of time to raise your calves. Give them the skimmed milk; you can keep it sweet in winter. In summer you give a calf sweet milk today, and sour milk to-morrow. When you feed regularly sweet skimmed milk, I guarantee you can raise just as good calves with that and a little other food as when allowed to suck. Corn and oats, cotton seed meal, do not give the calf a bushel a day, but a handful. When the calves get that they will do well. When a calf sucks it gets all that butter fat that is not necessary for it. When the farmer learns that he can raise calves on skimmed milk, then it will pay to raise calves in Missouri.

What does a good dairy community consist of? If you take the train and go through a good dairy community, you will see fine houses, fine barns and good roads. When you go out of that section you wonder at the difference.

In a dairy community there is a steady income right along; you don't have to go to the storekeeper and ask for things on trust. As a rule, there are good schools, beautiful people, and good buildings. The roads are half the battle; I never saw as poor roads as we have here. When we have to fix a road, we get together and talk and then go to dinner; after dinner we talk again, and the road stays as it was. There is better education among the dairy farmers than there is among the farmers who do not have a dairy. They take several good papers. There is more money among them, because there is always something coming in. Of course, it is not the cows alone. You must figure out in proportion to the cows you have and the amount of milk you have, the number of hogs you can keep.

When a man has money he can build a stable, but if he cannot do any better he can make sheds. A man came to me and said, "I have seven cows and they are giving a good deal of milk, and I would like to patronize you, but have not any cans." By and by prices will be a good deal better than they are now, I said, and you bring in your milk, but he has not been there yet. He has no shelter to keep his cows in, he has no hay, he has no money out of your cow you must have good shelter for them, they must be taken care of. I think the great difficulty here in Missouri (I have not found it in any other place) is that the farmers will not milk the cows here. If they want milk, they just take a little and the calf gets the rest. It cannot be so in an ideal dairy community.

I am not talking creamery, but take good care of your milk whether you take it to a creamery or not. Patrons of a creamery get together at the creamery in the morning and talk together and advise one another. We should all come together and talk over what is best. We organized what we call the Macon County Creamery Association. We talk over what to feed, how to feed, and where to get it. That I think is a very good thing among all of us, that we come together and talk those matters over, and if you have anything better than I let me know about it. Help one another, it brings a better understanding. I think that if anybody expects to have what we call an ideal dairy community, he ought to make one or more good dairy papers and read them. When you get through with them and find something good, mark it or cut it out, or hand it to your neighbor. "By so doing you will see that it will not take long before you will get together, talk the matter over and derive profit in the long run."

If you have cows, whether five or fifty, it makes no difference how few or how many, take care of them. Do not overstock yourself. But if you have five or fifty cows and neglect them for outside business and do not milk them, then I say sell them, get rid of them as soon as you can.

I am much disappointed in Missouri as a dairy business. I don't believe there is a state in the Union that can produce as cheap milk as Missouri. Up near Macon it does not pay to raise grain. They cannot begin to compete with Iowa in raising grain. But I have seen them clear off the brush here in Missouri and have nice blue grass without sowing the grass seed. Why is it that the people do not take hold of it better than they do when they do not have to raise grass? In lots of places in Missouri there are creameries, but they are locked up. There was one in Macon and I bought it, but it is up-hill business. When the day comes when the farmers learn to feed the calves skimmed milk, the whole problem will be solved. They must know the value of the skimmed milk. If they figure out just what makes them get out of it they will not be satisfied; they must figure on the value of the skimmed milk and use it right.

Mr. Erwin—There is just one point in Mr. Miller's speech that I do hope you will indulge us Missourians in calling attention to as a compensating fact, and that is that where mud is grass grows, and we had not thought about that before; that the best grass grows where there is plenty of mud, and I am sure we have it in Missouri.

MISS EBBE R. HALLBORN, a charming young lady of high living near Willmar, Minn., recently won a prize of \$10 offered to the young woman who could prove she had milked the greatest number of cows from January 1 to October 1, 1901. Miss Hallborn milked 10,200 cows within the period named—an average of 19 cows twice a day. She is but 16 years old. What need of milking machines when Minnesota's daughters can make such a record as this?

## THE DAIRYMAN'S ACCOUNTS.

(Concluded From First Page.)

I do not propose an intricate system of bookkeeping, a cash book and a ledger of the simplest sort being all that is essential. If you wish, you can enter, other than cash items, in the cash book, placing on the opposite page a similar entry charged or credited to some general or special account. This operation is called journalizing, and gives you in effect a regular double entry system, but so simple that a schoolboy could manage it.

You can also draw off a monthly trial balance to verify your work. You can keep all your bills payable and bills receivable in your ledger along with your classified accounts of interest, profit and loss, etc., and last but not least, at the end of your business year you may draw off from your ledger your annual statement or balance sheet, showing the condition of business, and from this balance sheet, with the addition of an inventory of all your property, you can estimate the cost of production, the value of all your products and the amount and profit of your business.

The cash book is but the development of the barn door. On the left hand page you place chronologically all your items of income and the amounts. On the right hand page all your cash outgo. A frequent balance of these two columns should be made, and the difference should represent the amount of cash on hand.

Once a month, or once a year, or whenever you feel like it, you may transfer these cash book entries to their appropriate places in the ledger. This is called posting. The difference in principle between the cash book and the ledger is one of arrangement. Your cash book is an arrangement of entries according to time of happening—from day to day—and your ledger simply classifies these items by accounts or headings. A trial balance is in effect a copy of the ledger balances arranged in two columns, debit and credit, the totals of which must be equal.

No particular reference to your income need be made here. That can safely be left to your own endeavor. It is of the expense account that I wish to speak and not alone of the actual cash paid out during any given year, but of each and all of those facts which must be considered in the cost of production for which no cash may be paid, such as your own labor, the interest value of your own farm, etc.

The first item of expense to be charged up to the cost of production, is that of rent, or in case of ownership, interest on the land value. If you own 100 acres of land, worth \$80 per acre, this \$8,000 should earn its market value, say 6 per cent, as a separate investment. It could be loaned at that rate and rent paid with the interest.

The money invested in all other property should also earn its proper interest value, and this amount charged as one of the items of expense. Then comes a subject overlooked by so many, and that is a charge for wear and tear or depreciation of the value of stock and material. Sooner or later our cows will die, our hogs will be sold, or they are sold at a partial loss. Sooner or later our machinery and tools must be replaced, and a fund for the purchase of new stock and material, should be established or an average annual charge made to "anticipate" such purchases. Under ordinary circumstances ten per cent of the value of all personal property is none too great. If a cow gives milk profitably for ten years, she does well; if a mow survives ten active seasons, it has fulfilled its mission. Therefore, prudence and foresight impel me to mark up against the cost of running my plant a fixed charge to cover account, wear and tear, and final dissolution.

You may contend that the item of interest covers this question, as that pays for the use of the material, but suppose you rented from the owner, a dairy fully equipped with the understanding that you would not only pay rent but that you would also be responsible for breakage, accidents, etc. If you break a machine you must pay for it. At the end of the period you must return the property in as good condition as you received it. Even the item of repairs does not fully cover this subject, as a piece of machinery may suddenly become useless or you sell as second-hand a wagon or implement at a sacrifice. If you buy a new one you take money out of the profits, which are reduced to that extent. So I have deemed it advisable to make an average annual estimate, based on the probable deterioration for a number of years.

On the other hand, if your land on any portion of your property is increasing in value, you may properly enter this appreciation under the head of income just as surely as you would cash for milk or calves sold.

Taxes and insurance must not be overlooked. Taxes must be paid and insurance should be. If you "carry your own insurance" as some business concerns do, you must lay by each year a fund for that purpose. A fire may wipe out the entire property, but if you have a fund drawing interest laid by for this purpose, you are not fatally hurt and can start again. If you prefer to use this fund in your own business, instead of loaning to the bank, this does not alter the main fact that a charge should be made each year for insurance; otherwise you render yourself liable to the imputation of being both incautious and shortsighted.

All labor involved in the prosecution of the business, together with cost of board,

should come next. Do not stop with cash paid out to hired help. Do not forget your own labor both as manager and as laborer. If you are uncertain at what rate to fix your compensation, the amount of all household and personal expenses, not directly connected with the business, may conveniently be placed under the head of salary of manager.

Many do not appreciate the value of their own services. By some subtle process of reasoning they imagine that their work is paid for in the profits of the business, but no large corporation ever declares a dividend—the true sign of the profit—without first allowing salaries to every officer in the company from the president down. Your profit at the end of the year should be a profit on the business itself, not wages for your labor. Charge what is proper for your labor, and if there is anything left you will know that your business is in a healthy state and that you are being paid for the anxiety, the hazards and responsibilities of conducting an enterprise that may fail, whereby you lose your entire investment. As a capitalist you must not be satisfied with mere wages. The risks of investment and the responsibilities of the employer should earn something of themselves. Perhaps, as a virtue in its own reward, so also is the game of the strenuous life sufficient compensation in itself. There is something in that.

However, I venture the assertion that the dairy business as a straight business proposition should show the investor a profit above all expenses.

Seed and feed purchased should be figured as the taste of the individual may desire.

Under the head of Dairy Expense or Incidentals or any other general term, all small regular items should be placed. Some of these would be repairs, horse-shoeing, ice, fuel, oil, cans, brushes, bottles, shipping charges, etc., all itemized and classified as minutely as the facts suggest. I like to know how much my horse-shoeing costs each year and how my ice bills for this year compare with last, and so on.

Under the head of Sundries (a purely arbitrary term) I enter any unusual or considerable expense.

With the question of economy of production I have, in this connection, no special concern. It is within my province to deal herein with but the evidences of that economy. However, it is my firm belief that thousands of cow owners are producing and selling milk, year by year, at less than cost. This loss is not exemplified in the way of "failures" in the Bradstreet sense of the word. Few farmers avail themselves of the bankrupt law, but they do show in the thousands of cases of those who do not "get ahead" in the terrific struggle for existence; the grinding toil; the hardships and dull flat monotony; the foreclosure of mortgages; the bent shoulders and hard and spiritless faces. All these have made it possible for an American poet to transfer from canvas to literature that piteous picture, "The man with the hoe." For Miller's peasant we have only pity and welcome. With the weight of centuries upon his shoulders, he lives amidst conditions, which for him are unchangeable and relentless. In America we have no peasant class and to a large extent every man is truly the architect of his own fortune. The opportunities for success lie within us, and it is to open to your view a glimpse of but a small portion of that road we must all travel to achieve success, that I leave with you these few thoughts and suggestions.

## OLEOMARGARINE LEGISLATION.

December 6 is the day set on which to take up oleomargarine legislation again in the congress of the United States. The bill that has been before congress for so long is objectionable to the makers of oleomargarine because it compels them to pay a high revenue tax on colored imitations of butter. While the bill makes this provision it also reduces the present tax all imitations of butter which are sold in their natural condition as to color.

The strongest plea of makers of imitation butter has always been that it is "the poor man's butter" and any tax put on it is a tax on the poor people of the country. This argument is fallacious, as it is shown by the fact that the proposed legislation will reduce the tax on uncolored oleomargarine, and thus make it possible for the philanthropic (?) mixer of grease to sell his product to the "poor man" at a price several cents a pound lower than he now can.

No one objects to oleomargarine any more than to any other kind of grease as long as it is sold for what it is. There would naturally be objections to selling it as butter, but no one would object to selling tallow for just what it is. If the makers of oleomargarine desire to sell their products for what they are they can do so under the proposed law at a merely nominal cost as to taxes, but their cry of saving money to the poor is not believed by any one.

It is said that Moxley, the oleomargarine dealer of Chicago, recently asserted that he has made \$1,000,000 selling oleo and very few will doubt his word. He is a rich man and is getting richer not because his product is sold as oleomargarine in all cases, but because it is colored to imitate butter, and sold as butter.

Any law to be effective must be supported by public approval. We no longer need more legislation on this subject just now. Recently at Elgin, the center of the butter industry, five persons were accused of selling oleomargarine, and the evidence against them was strong, yet the juries before which they were tried acquitted in three cases and disagreed in two. Until the courts can convict, offenders will go free, and the laws will be nullified.—Dairy and Creamery.

"BUFF JERSEY" has written another book for the dairymen, stock breeder and farmer. We have looked through the copy sent up by the author and we assure our readers that he has put a large amount of very useful information in his 60 pages. The book was written, Mr. Cobb says, partly in self-defense. So many farmers and dairymen are appealing to him for advice relative to the breeding, feeding and management of their herds, that he is filling slots; running a creamery; operating a separator; using a Babcock milk tester, and on a thousand and one other points, that too much of his time was taken in answering letters. He therefore prepared and had printed this little book so that when a request for information comes all he has to do to answer it is to wrap up and mail a copy of the book. A hint to our readers is sufficient.

TO CURE A COLD IN ONE DAY Take Laxative Bromo Quinine Tablets All druggists refund the money if it fails to cure. E. W. Grove's signature is on each box. 25c.

## STUBBORN CALVES AND STUBBORN FEEDERS.

The skim-milk calf has come to stay. Men have learned by experiments, and by careful feeding that skim-milk is the cheapest and best feed for a calf, especially for the dairy calf. The greatest trouble is the danger of over-feeding. Most people seem to think that because skim-milk isn't very rich they must give the calf lots of it, so they pour it down him by the bucket, without stopping to think what a calf's stomach is like, and the result is that they soon have a lot of "pot-bellied" calves, writes J. L. Smith in the "Kansas Farmer."

When the calf is a few days old he is taken away from the cow, and put into a shed where he is taught how to drink skim-milk. Then the fun commences. If the calf will not drink the milk right off, and a little stubborn, the fellow who is trying to feed him usually gets mad, jumps straddle of the calf's neck, backs him up in a corner, grabs hold of the calf's head with both hands, and rams it down in the milk to the bottom of the pail, then the calf gets mad and bawls, and tries to get away, gets strangled, and finally succeeds in spilling the milk.

It is best to have a little patience with the calf, and remember that it does not have very much sense at first. After it has sucked the cow two or three times it should be taken away and put in a good clean pen and fed on its mother's milk for a week or two. Then begin to gradually reduce the whole milk and add a little skim-milk each day, until within a couple of weeks it will be on skim-milk alone. A good substitute for the fat removed is a little corn-meal given after drinking. This will also keep them from sucking each other. Over-feeding, irregular feeding, or feeding cold, sour milk is apt to cause scours with the calf.

To feed skim-milk fresh from the hand separator on the farm is the best way, because it is always warm and sweet. The skim-milk from the creamery is all right, but in warm weather it will not keep sweet very long unless it is sterilized well and thoroughly cooled when brought home.

## FIGHT OVER OLEOMARGARINE.

Washington, November 23.—The fight over oleomargarine legislation will begin early in the session. During the summer vacation the dairy and pure-food people have been active, and claim to have made some pronounced gains to their forces. The Groat bill will be reintroduced, changed in some particulars. The most important change is a concession on the part of the pure-food supporters that the tax on uncolored oleomargarine shall be entirely removed.

## WHEAT AS A FOOD FOR DAIRY COWS.

At the Minnesota Experiment Station, it was found that when wheat was fed in a ration at the rate of 7 pounds per day, and mixed with 6 pounds of bran and 1 pound of oil-meal, the results were practically the same as when 3 pounds of corn and 4 pounds of barley were fed in place of 7 pounds of wheat. That is, 7 pounds of ground corn and barley produced the same results in a dairy ration as 7 pounds of ground wheat. "It appears that there is practically no difference between the feeding value in weight of ground wheat and ground corn and barley."

When wheat was fed at the Maine Experiment Station, the results in milk yield and fat content of milk were nearly the same as when corn-meal was fed. Corn-meal and wheat-meal were considered to be about equal in feeding value for dairy animals.

At the Ontario Agricultural College, wheat-meal did not produce as good results as a ration consisting of one-half oats and one-fourth each of ground barley and peas. The mixed grain ration gave better results than the ground wheat ration.—Press Bulletin Minnesota Experiment Station.

## AN OLD RELIABLE JOURNAL REDUCES ITS SUBSCRIPTION PRICE.

With an enterprise worthy of the cause for which it was established 18 years ago, "The Jersey Bulletin," of Indianapolis, Ind. (the only weekly publication devoted exclusively to Jersey cattle and purely dairy interests), has reduced its subscription price as it grew older and better and increased in size and influence. Steadily the price has fallen, from \$2.50 in 1883 (then a sixteen-page semi-monthly) to \$2.00 in 1888 (when it had become a weekly); in 1898 to \$1.50 (by this time running monthly to twenty-four pages each week).

The dollar rate for "The Jersey Bulletin" goes into effect January 1, 1902, and in this third reduction the management has realized its desire to place this high class Jersey cattle and dairy publication within the reach of all. The price of one dollar a year for so much weekly excellence seems ridiculously low; but "The Jersey Bulletin" seems determined to cover its field. It issues from twenty-four to thirty-two pages, filled with correspondence and news of interest to admirers of Jersey cattle and to all others concerned with honest dairymaking. "The Jersey Bulletin" gives all the news, misses nothing. Our readers can get a sample copy free by writing to D. H. Jenkins, Indianapolis, Ind. One of the assurances to subscribers is that they may have their money back any time during the year if they are not satisfied with "The Jersey Bulletin," by simply saying so.

## MAKE THE COW COMFORTABLE.

A cow is a great deal like a person. She enjoys a good and comfortable place to eat and sleep as well as any man. Do you think that you would enjoy standing on the south side of a barbed wire fence to eat your meals when the wind is blowing at the rate of forty or fifty miles an hour from the northwest in the winter? No, I guess not! Can you expect a cow to make you money when served in that way? Then, summing up all of this, the cow must be at perfect ease and comfortably situated and have kind treatment in order to give good results.—Exchange.

INTERNATIONAL STOCK FOOD CO., Minneapolis, Minn., writes: "Owing to the immense increase of our business we have been compelled to again increase our factory help. At this time we are constantly using thirty typewriters, and it requires 74 people to attend to our office work alone. Our office is acknowledged to be the largest of any in the entire northwest, for any line of business, and we believe it is not exceeded by a very large number in this country. We hope to increase it next year."

If you feed and water stock, it will pay you to write O. R. HARRY STEEL WORKS, St. Louis, for their Illustrated Catalog of Feed Cookers, Hog Troughs, Tanks,

## Juggling of Separator Facts

AT THE

## BUFFALO EXPOSITION.

One of our desperate would-be competitors persists in its unscrupulous juggling of Separator facts and records at the Buffalo Exposition. One lie or misrepresentation stamped out it bobs up the next week with another. But everything must come to an end, and as a correspondent pertinently writes us "long after both these second-rate imitating machines and their projectors are turned into poor fertilizer the De Laval will continue—as in the past—to demonstrate its all-round superiority to anything else ever made in the shape of a cream separator."

The De Laval Cream Separators having been awarded the Gold Medal at Buffalo and the concern in question a gold medal on its combined exhibit of churns, separators and Babcock testers, it at once brazenly advertises having received "the Gold Medal and Highest Award" on its "separators," without qualification, in the hope to thus influence some possible separator buyer.

Next it proceeds to put out what purports to be a skim-milk record of the work done by the "U. S." machines in the Model Dairy at Buffalo. As a matter of fact this is not a record of the full run of the machines, but simply of a selected part of it. Much of the "U. S." work during the first month of their run would not compare favorably with ordinary gravity setting. It was so bad that one machine was thrown out altogether. Their average for the full time shows a skim-milk loss of nearly three times the published figures.

Even then these so-called "skim-milk" records were but mere jugglery and show absolutely nothing as to the practical work of the machines. These "records" were achieved only through excessive speed, excessive power, cutting down capacity and running so thin a cream that more fat was lost in churning than saved in separating. The following voluntary statement from the engineer of the Model Dairy tells its own story in this regard:

Buffalo, N. Y., November 2, 1901.

The De Laval Separator Co.,

74 Cortlandt St., New York, N. Y.

Gentlemen:—As engineer of the Model Dairy at the Pan-American Exposition, Buffalo, I was impressed with the following points of merit in the running of your Cream Separator. It did its work very smoothly and quietly, showing by its running its mechanical excellence. I could run it with a much smaller consumption of fuel and lower steam pressure. In fact, it took but one-fourth as much steam to do our work with it as the "United States" separator used to do the same work, and at no time did I have to force my fire or boiler to keep up the supply of steam as I did when the latter machine was in use.

We were sorry to see the De Laval leave on June 28 and glad to see it returned on August 9th, as it made less labor for all. Your representatives let the regular Dairy force handle it, while your competitor, the "United States," had an expert to run their machine during the greater part of the time of their run, and even then he could not make a record for close skimming except by running his machine at an excessive speed of 11,000 to 12,000 revolutions a minute, cutting down the capacity, and making a thin cream. One morning in particular the cream was so thin that I had to run the churn two hours and twenty minutes before the churning was done.

While I am not an expert in creamery work, I hold a first-class engineer's license and I want to say that your separator from a mechanical standpoint, in the design and finish of the parts and in the economy of fuel and labor, easily ranks first, and I do not wonder that your competitors would rather not place their machines alongside yours.

Yours very truly,

JAMES F. DOWNEY,

Engineer Model Dairy.

The published records of the De Laval machine in the Model Dairy at Buffalo were made under practical use conditions, such as may be duplicated by any De Laval machine in everyday use, and the machine was run by the Exposition employees themselves and not by a manipulating expert juggling for "skim-milk" records.

## THE DE LAVAL SEPARATOR CO.

RANDOLPH & CANAL STS.

CHICAGO.

1102 ANGE STREET,

PHILADELPHIA.

103 & 105 MISSION ST.,

San Francisco.

General Offices:

74 CORTLANDT STREET,

NEW YORK.

327 COMMERCIAL ST.,

MONTREAL.

75 & 77 YORK ST.,

TORONTO.

248 McDONNELL AVENUE,

WINNIPEG.

**IDEAL FEED MILLS**

They fit the requirements of the farmer and feed better than any other mill on the market. This No. 29 Ideal is the fastest two-horse sweep feed mill made for grinding ear corn and shelled corn into coarse or medium grade meal. No mill can be made better. Some of our customers report grinding 25 to 30 bushels per hour with it. The "Ideal Family" of feed mills is a large one, embracing every variety. Write at once for catalog, which illustrates and describes them all.

**THE STOVER MFG. CO.,**  
534 River St., Freeport, Ills.

**Genuine C. C. Co.'s PATENT EDGE CORRUGATED ROOFING**

makes a perfectly tight joint with one corrugated side lap. Don't throw away money on the other







**PATENT GROOVED**  
**Tire Wheels**  
 For Farm Wagons  
 Any Size to Fit any Wheel.  
 Made of best rubber  
 HAVANA METAL WHEEL CO.  
 Havana, Ill.  
 We are the largest manufac-  
 turers of steel wheels and low  
 down trucks in the U. S.  
 Write for Prices.

## Live Stock

### DATE CLAIMS FOR LIVE STOCK

Dec. 10, 11, 12 and 13—Kirk B. Armour and Jas. A. Funkhouser, at Kansas City, Hereford cattle.  
 Dec. 13—C. D. Bellows, Maryville, Mo., at South Omaha, Shorthorns.  
 Dec. 19-19, 1901—Gudgell & Simpson, C. A. Stannard and Scott & March, Herefords, at Fort Worth, Texas.  
 January 23 to 31, 1902—Sotthams' annual Criterion Sale, at Kansas City.  
 Jan. 14, 15 and 16—Cormish & Patten, Osborn, Mo., and others, at Kansas City, Mo. Hereford cattle.  
 Feb. 11-12, 1902—Redhead Anisty, Boyles and others, at South Omaha, Neb. Hereford cattle.  
 March 6-7—M. Forbes & Son, Henry, Ill.; J. F. Prather, Williamsville, Ill.; S. E. Prather & Son, Springfield, Ill.; C. B. Dustin & Son, Summer Hill, Ill.; T. J. Wornall, Mosby, Mo., and others, at Chicago, Ill. Shorthorns.  
 March 11—W. P. Nichols, West Liberty, Iowa, Shorthorns.  
 June 19—C. E. McLane, Danville, Ind., at Indianapolis, Double Standard Polled Durhams.  
 The "National Hereford Exchange" under management of T. F. B. Sotham, as follows:  
 March 25-27, 1902—Chicago.  
 April 23-24, 1902—Kansas City.  
 May 27-29, 1902—Omaha.  
 June 24-26, 1902—Chicago.  
**POLAND CHINAS.**  
 Nov. 23—J. B. Fink, Herborn, Ill.  
**ABERDEEN ANGUS CATTLE.**  
 Dec. 3-6—International sale, W. C. McGavock, mgr., Chicago.  
 Feb. 4-6—Combination sale, W. C. McGavock, mgr., Chicago.  
 Jan. 22—E. E. Axline, Oak Grove, Mo.  
 April 19-21—Combination sale, W. C. McGavock, mgr., Kansas City.  
 June 19-21—Combination sale, W. C. McGavock, mgr., Chicago.  
**NATIONAL SHORTHORN SHOWS AND SALES.**  
 March 19—At Kansas City; W. R. Nelson, dispersion sale.  
 March 30—At Kansas City; B. B. and H. T. Groom, Pan-Handle, Texas.  
 May 14—At Kansas City, Mo.; W. T. and H. R. Clay, Plattsmouth, Mo.  
 Dec. 2-7—Chicago, Ill.  
 Dec. 5-6—Chicago.  
**NATIONAL HEREFORD SHOWS.**  
 Dec. 2-7—Chicago, Ill.

### ARMOUR'S ST. LOUIS PACKING PLANT.

Plans for the Armour Packing Company's establishment to be opened in East St. Louis have been almost completed. They call for the expenditure of about \$500,000 at the outset, but Charles W. Armour, the head of the Armour interests, states that this does not limit the sphere of the company. "We are merely starting there," said Mr. Armour. "We have found that it is necessary to begin packing in East St. Louis and we have ordered a plant established there. It is impossible to say what the ultimate outlay of money will be, because it is impossible to more than speculate upon what the business will justify. I will say that we intend to push the enterprise, and the initial sum will not represent all we intend spending there."

"It was originally reported that you would spend \$5,000,000 building in St. Louis, Mr. Armour?" was asked. "We may spend that and more," was the reply. "No time is to be lost, once the work is started. The plans are now drawn so as to admit of enlarging the plant to four times its original capacity."

### EXPORTING CATTLE FROM GALVESTON, TEX.

The local office of the Bureau of Animal Industry was treated to something of an innovation today, when a letter was received from Dr. Joseph W. Parker, inspector stationed at Galveston, Tex., asking for necessary instructions in regard to the shipment of export cattle from that port. Cattle have frequently been exported from the port of Galveston to the island of Cuba, but have never been shipped across the ocean. In his letter to which country the shipment was to be made, but merely mentioned the steamship Ikal, on which the cattle were to be loaded, and sent across the water December 2.

Owing to this being the first case of its kind in the history of Galveston, since the bureau was established there, no appliances were at hand for Inspector Parker to work with. The regulations of the department provide for all export cattle to be inspected and tagged. The former could be attended to, but the lack of apparatus prevented the latter proceeding. On this account, the department waived the clause providing for the tagging of the animals for this one case, but in the future the law will be adhered to.

### BLACKLEGLINE OUTFIT.

The new Blacklegline outfit furnished with the Pasteur Blackleg Vaccine in the cord form, or "Blacklegline," as it is called, has met with great success. This new outfit only costs 50 cents, and renders vaccination cheaper, simpler and more effective than ever. "Blacklegline" is the vaccine in the form of a cord which is saturated with the vaccine. Each dose is separate, which is a great convenience. The outfit consists of a needle furnished with a detachable handle, and there is an extra needle in case of breakage. The dose of "Blacklegline" is inserted in a notch in the needle, and the operation of vaccinating is now as simple as taking a stitch. An illustration of the outfit will be found in our advertising columns.

Get down, even if they do not die. Hood Farm Calf Scour Cure and Digestive Powder, used in connection, cure scour promptly; keep calves from shrinking. \$1 and \$2.50. Sent to any railroad express point in U. S. 25c extra. C. I. Hood & Co., Lowell, Mass.

### TO PREVENT SPREAD OF TEXAS FEVER.

Wichita, Kan., Nov. 28.—The Live Stock Sanitary Board of Kansas and Oklahoma met here today. It was decided to allow no open season for cattle in the district infected with Texas fever. This action was taken to prevent the spread of Texas fever among cattle at this time.

### FOOT AND MOUTH DISEASE CURE.

The Italian government has given official cognizance to a cure for foot and mouth disease discovered by Dr. Guzzi, a young Lombard physician, by recommending the matter to the serious attention of all veterinary surgeons. The cure consists of injecting a solution of corrosive sublimate and common salt in distilled water into the mouth. Once started foot and mouth disease spreads like wildfire. It is probably the most infectious disease known.

### BRITISH CATTLE INSPECTION.

Washington, November 28.—Secretary Wilson talked to the cabinet recently about what he regards as the failure of the Canadians to adopt the agreement made with the United States in regard to bringing cattle into Canada and this country from England, Scotland and Ireland. This agreement, made a number of years ago, provided that an American and a Canadian inspector of cattle shall be kept in Great Britain to inspect cattle coming to Canada, destined either for Canada or the United States. This was to guard against getting disease into the country. The information Secretary Wilson has is that the Canadians have withdrawn their inspector and permit the inspection to be made by citizens of Great Britain, who may be competent in his knowledge of cattle, but does not have the same interest that a Canadian would have in the cattle.

### ANIMAL INDUSTRY.

Secretary of Agriculture Wilson, in his annual report for 1901, devotes a considerable portion of the report to the subject of animal industry.

The grand total of animals and animal products exported during the year exceeded \$250,000,000 in value. This vast foreign market is only preserved to our producers by the indefatigable efforts of the department and the rigid inspection exercised through the Bureau of Animal Industry. This bureau inspected for export 35,000 cattle, 228,000 sheep, and 46,000 horses and mules, and nearly 1,000 vessels carrying live stock. Imported animals were also inspected to the number of 342,000, and where necessary, quarantined. The secretary suggests that with the enormous interests our stock raisers have at stake, and inspection or quarantine affording, after all, a relative, not an absolute guarantee of protection, it might be well for this country to follow the example of Great Britain and exclude live stock from other countries entirely. The meat inspection service involved the inspection at time of slaughter of nearly 37,000,000 animals. Of the more than 5,000,000 cattle inspected, the condemned carcasses were about one-fourth of 1 per cent; of the 6,500,000 sheep, one-tenth of 1 per cent; and of 24,000,000 hogs, one-third of 1 per cent. In the control of indigenous diseases, 1,500,000 inspections were made and over 45,000 cars disinfected in the Texas fever service alone. In the repression of scabies in sheep nearly 8,000,000 animals were inspected, and over 1,000,000 dipped under the supervision of the department inspectors. In combating the disease known as "blackleg" the bureau distributed over 1,500,000 doses of vaccine, the result being to reduce losses in affected herds to less than 1 per cent, where formerly it was in most cases about 10 per cent. To aid in detecting tuberculosis in cattle and swine, 100,000 doses of vaccine were distributed, and 7,000 doses of mallein have been supplied. The secretary points out the serious evil resulting from a system of State inspection which, if it became general, would effectively prevent the marketing of live stock in some sections, and would destroy much of the usefulness of Federal inspection. He regards the present conditions as menacing to the interest of the cattle industry in the West and Southwest that he has requested the attorney-general to co-operate in bringing the matter to the Supreme Court for decision as to the constitutionality of these State laws. This request has been favorably received and the assistance of the Department of Justice promised.

### PROFESSION OF BREEDING AND DIVERSIFICATION.

There was never a time when pure-bred cattle were as much in demand as now. While cattle have been sold at auction for more than fifty years, this branch of the business is now at its height. Many farmers who have heretofore been grading up the scrub herds for market purposes have been visiting the fairs, auction sales and fat stock shows and profiting by the lessons they have learned, are now laying the foundation for a herd of pure-bred stock. With the small farmer who operates a few hundred acres the question of feed for his herd is rarely ever assumed the complex proportions so familiar to the large owner. As the idea of diversified farming grows apace we may expect to see the number of farmer-stockmen increase. Diversification is the farmer's salvation. The idea is just beginning to take hold. In the South it has been corn and cotton; in the West, corn, wheat and oats, and in the North, corn and wheat. The fine stock features, except in a few instances, were not considered. These conditions are rapidly changing, and the farmer is growing unconsciously into professional lines. The most potent factor in the development of the profession of breeding is the county, state and national fairs, and the great live stock exhibitions which are held annually in all parts of the country. The farmer attends these annual exhibitions and receives his first inspiration to enter the rank and file of the great army of breeders. If he is sensible he will begin at the bottom and master all the details of the business. He is like the student who is inspired to become a lawyer or a doctor; he takes for his first text-book some reliable, up-to-date live stock publication; his State Fair is his alma mater and his diploma the premiums he wins. He is an apt student and soon announces to the world that he is a professional breeder. This is the pinnacle of diversification. When the farmer becomes a breeder also he will have become more intelligent by contact with the world and diversification will be as an open book to him.

The young lawyer occasionally visits some great school of learning, attends a course of lectures by some eminent authority. The young doctor attends some great clinic, where he is enabled to learn the latest methods in surgery and general practice. Why, then, shouldn't the professional breeder have some great institution of learning? Some fountain head of knowledge equal to any in his profession, where he may absorb the great principles of science involved in mating, breeding and feeding cattle, hogs, horses and sheep? The profession of breeding, unlike that of law or medicine, will never be overcrowded, and if the breeder be small or large, in a pecuniary sense, his judgment will always be respected. The profession of breeding is yet in an embryo state, but is enjoying a phenomenal growth since its inception. The cattleman of the range, the farmer in the thickly populated districts, and occasionally a convert from other professions constitute the membership, and at no distant day it will darken the burnished ceiling of the heavens with the shadow of its greatness. It will stand an everlasting monument to American ingenuity and progress.—Drovers' Journal.

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The time is at hand when most farmers, particularly like the writer (who was brought up in the city and in business until about 15 years ago), are planning how to carry their live stock in the best and most economic way during the coming winter.

I would say, first provide proper shelter, so when the cold, stormy days and nights come, they will not suffer from exposure. This saves largely of food. Second, arrange to save your corn fodder in good shape. Then, to make the greatest saving, have it shredded as soon as possible after the corn is husked. About nine years ago I bought a St. Albans fodder shredder, and have used it ever since with much satisfaction and profit. This shredder, being of large size, requires an engine to run it. This I hired at \$5 per day, and it was money well spent. It has a carrier, which elevates to loft as shredded. Then store it the same as hay, being careful to pack as tight as possible. By handling in this way we have had it keep well, free from mold and eaten up clean, and stock kept in fine condition.

The old fashioned way of leaving the fodder in field, and hauling as needed, is a great loss of its value, saying nothing of the unpleasant handling and hauling in bad weather. When shredded in good condition about all is eaten, which enables you to keep three times as much live stock, to make manure, saving largely on bill for fertilizers. If you can arrange to grind your grain, so much the better. Then you can use all to the very best advantage. By wetting well the night before what will be required for a day's feed, and putting it in a large box with cover, it softens during the night, so the ground grain sticks and all is eaten at one time. I usually have 20 to 25 acres of corn, and to show the advantage of shredding, I generally winter 16 to 18 horses and colts, some of which are boarders, 25 to 30 sheep, and 8 to 10 cattle. All these I carry in fine order without use of any hay. I always plant carrots for horses and colts, which they relish as a child does candy, and which keep their coats in fine shape. For cattle I plant mangels, rutabagas and turnips. I know this is nothing new, but it may be of interest to some one who has tired of the fierce competition in business and has gone to the farm for a change. We can't make money fast, but we can live on the best of fresh vegetables and fruit, and breathe pure air. This favors good health, without which life is a burden.—Henry Riemann in Co. Gen.

### TRIM THE BULL'S FEET.

From a circular sent out by the Aberdeen-Angus Breeders' Association we take the following: The neglect to trim the overgrown feet of a bull makes him walk awkwardly and look ungainly, and may cause his legs to grow crooked. To look and feel his best he should stand straight and comfortably on his feet. The following plan of trimming a bull's feet is recommended by an experienced herdsman. Take a fine saw and saw off the point of the hoof as far back as is safe without touching the quick; then saw under the hoof, commencing just under the horn on the upper side, and saw back towards the heel, sloping downward so that the saw will come out at the lower surface of the hoof. A chisel may be pushed under to cut the piece away if the saw does not cut through the soft part at the heel. This will throw the animal's weight forward on the front of the hoof and give him an easy and natural appearance. A rasp may be used to round the points of the hooves. If the animal is nervous and liable to kick, a sack thrown over his head to blindfold him may have the effect of quieting him, and if by scratching his head or shoulders his attention be attracted from the operation, it may prove helpful.

THE COMBINATION SALE OF HEREFORD CATTLE, Fort Worth, Tex., to be held Dec. 17 and 18, 1901, is one that should receive the attention and patronage of the cattlemen and breeders of the South. When it is understood that the offering of this sale has been selected from the herds of such noted breeders as Gudgell & Simpson, Scott & March and C. A. Stannard, it will be conceded that the animals in this sale will be of a breeding and quality that rank in the highest. These breeders have a national reputation which they have pride in sustaining, and the animals offered will not only be of the highest breeding, but also will be fine individually. There will be 100 head of these registered Herefords, consisting of 100 bulls and 50 heifers, ranging in age from eight months to three years old. An especially valuable feature of this offering is that 40 of these cattle have been inoculated as a preventive against Texas fever by Dr. Connaway of the Missouri Agricultural College. To buyers who are located below the quarantine line this fact is very important. The South is finding the need of raising a better grade of cattle. Market reports show that prices for southern cattle rule low, and the only reason is because of the low grade of cattle marketed in this section. Therefore let the southern farmers attend this sale, sending in the meantime to Gudgell & Simpson, Independence, Mo., for a catalog.

SCOTT & MARCH, Belton, Mo., are offering some splendid Herefords of both sexes for sale, and if any of our readers want some good cattle a visit to the herd will satisfy them on this point, and doubtless result in their finding what they want at satisfactory prices.

# GREAT COMBINATION SALE OF REGISTERED HEREFORD CATTLE

To be held at the Northern Division, Union Stock Yards, FORT WORTH, TEXAS, TUESDAY AND WEDNESDAY, DEC. 17-18, 1901,

By Gudgell & Simpson, of Independence, Mo.; Scott & March, of Belton, Mo., and C. A. Stannard, of Sunny Slope Farm, when 150 head of registered Herefords will be sold, consisting of 100 bulls and 50 heifers, ranging in age from 8 months to 3 years old. Forty of these cattle have been inoculated as a preventive for Texas fever by Dr. Connaway of the Missouri Agricultural College, and a certificate from Dr. Connaway, giving the animal's tattoo number, will be furnished with each animal. This should be of special interest to buyers from below the quarantine. The cattle to be sold in this sale are in nice thrifty condition and fair representatives from the herds consigning them. Among them are prize winners at the leading State and National Fairs of 1900 and 1901. Sale will commence promptly at 10 o'clock each day. As these cattle will sell in the Northern Division of the Stock Yards, buyers from north of the quarantine can safely buy them. For catalogues, address Gudgell & Simpson, Independence, Mo.

**CUDGELL & SIMPSON, SCOTT & MARCH, C. A. STANNARD,**  
 Independence, Mo. Belton, Mo. Emporia, Kan.  
**AUCTIONEERS: Cols. R. E. Edmondson and J. W. Sparks.**

### THE WINTER FEEDING PROBLEM.

By Prof. H. J. Waters, Dean Missouri Agricultural College, in October Bulletin Missouri State Board of Agriculture.

**WHEAT AS A STOCK FOOD.**—For a short time this summer there was little difference between the price per bushel of wheat and corn, and as a bushel of corn represented but 50 pounds and a bushel of wheat 60 pounds, attention was drawn sharply to wheat as a possible substitute for corn in feeding our stock. A number of careful tests of the feeding value of wheat as compared with corn have been made, a summary of which may be found in the following tables:

### \*FOR FATTENING STEERS.

	Daily Gain Per Steer, Pounds.	Dry Matter Required for Pound of Gain.
First Trial.		
Corn meal .....	2.67	10.31
Wheat meal .....	1.98	10.02
Second Trial.		
Corn meal .....	2.02	9.90
Wheat meal .....	1.70	11.78

\*Ohio Experiment Station Bulletin 60.

It will be observed that the steers made a more rapid gain on corn, required less dry matter per pound of gain than when fed wheat.

With dairy cows the experiments indicate that the wheat when ground has practically the same feeding value as ground corn.

With hogs the results are shown in the table below:

### SUMMARY OF TESTS WITH WHEAT MEAL AND CORN MEAL FOR PIG FEEDING—VARIOUS STATIONS.

Stations.	Corn Meal Fed, Lbs.	Wheat Meal Fed, Lbs.	No. of Days Fed.	Feed Eaten, 100 lbs. gain.
Kansas .....	152	163	77	2,294
Ohio .....	136	137	70	1,238
South Dakota .....	96	108	90	1,159
Wisconsin .....	243	247	63	1,212
Wisconsin .....	247	247	126	6,014

Average .....

\*Henry's Feeds and Feedings.

The difference between the gains made and the food required for 100 pounds of gain are so slight as to be considered within the range of ordinary error in conducting such experiments and it is safe to conclude that the two foods have practically the same value for this purpose.

When, therefore, wheat costs \$2 per ton more than corn and when it is considered that the wheat must be ground to get the results shown above, corn is materially cheaper at the prices given. All of the attempts to feed wheat whole, dry, so far reported, have been unsatisfactory except for sheep. Their requirements have been obtained from soaking the wheat for hay, but even then too large a proportion of the grains pass through the animals unassimilated.

In case one has the wheat and the expense and trouble of marketing it and buying corn will overbalance the difference in price and the slight advantage in feeding value of corn, it is advised to mix the ground wheat with corn meal for hogs and dairy cows and with corn for steers. If this is not convenient, the addition of a small amount of cottonseed meal for the dairy cows and one-half meal for young hogs, will give better results than can be gotten from the feeding of wheat exclusively.

**SOME RATINGS FOR THIS YEAR.**—These ratings are suggested on the assumption that the farmer has some corn, a fair supply of corn fodder, perhaps some sorghum, millet or Kafir corn, hay or straw, but not enough of any or all to carry him through the winter, and that he will have to buy at least some grain and perhaps some roughness. It is clear from what has already been shown in regard to the advantages of balancing the ration that such coarse fodders as clover, alfalfa or cowpeas hay should be bought to the extent that roughness is required and that the grain selected should be of a character to further balance the ration rather than buy material similar to that which is already on hand.

It is to be understood that the amounts of grain, etc., shown in the ration are intended to be only sufficient to make a fair growth and take the animals to grass in

good thrifty condition when properly sheltered. If less or more growth or gain is required the amount should be decreased or increased accordingly.

### For wintering calves:

I. 3 pounds corn and cob meal or 2½ pounds of wheat meal.  
 3-5 pounds clover, alfalfa or cowpea hay.  
 All the wheat or flax straw, corn fodder or sorghum hay they will eat.  
 II. 2 pounds of corn and cob or wheat meal.  
 2 pounds of bran or oats.  
 1.6 pounds corn and cob meal or 5 pounds wheat meal.  
 2½ pounds cottonseed meal or gluten meal.  
 6 pounds of clover, alfalfa or cowpea hay.  
 All the straw, corn fodder or sorghum hay they will eat.  
 III. 8-12 pounds corn and cob meal.  
 All the alfalfa or cowpea hay they will eat and straw or corn fodder to eat when out of the barn during the day.

For yearlings these same rations will apply equally well except that the grain and clover should be increased about one-half.

### For dairy cows:

I. 6 pounds corn and cob meal or 5 pounds wheat meal.  
 2½ pounds cottonseed meal or gluten meal.  
 6 pounds of clover, alfalfa or cowpea hay.  
 All the straw, corn fodder or sorghum hay they will eat.  
 II. 8-12 pounds corn and cob meal.  
 All the alfalfa or cowpea hay they will eat and straw or corn fodder to eat when out of the barn during the day.  
 III. 8 pounds corn and cob meal or 7 pounds corn meal.  
 4 pounds cottonseed meal or gluten meal.  
 All the straw and corn fodder or sorghum hay they will eat.  
 These are what may be considered fair

### STOCK NOTES.

**LIVE STOCK JUDGING.**—Eight colleges, the same number as last year, will contest for the Spoor trophy at the International Live Stock Exposition this week. Missouri, which entered the lists last

amounts. A good dairy cow, however, ought to be able to consume larger quantities and return a greater profit than with these amounts. It is assumed that the dairyman will feed his cows up to the point of their greatest profitable production. Naturally as the milk flow diminishes toward the end of lactation period the feed will be reduced, not forgetting that in the case of pregnant cows allowance must be made for the nourishment of the young calf.

For hogs: With good shipstuf or middlings at practically the same price per ton as corn it will pay abundantly to use this material freely in connection with corn, especially for the young hogs and brood sows. The superiority of this mixture over the other fed singly is clearly shown in the results of the following experiment from the Wisconsin Station:

Feed.	Days Fed.	Food Eaten, Lbs.	Total Gain, Lbs.	Feed for 100 Lbs. Gain.
Corn meal .....	42	559	104	537
Middlings .....	42	501	96	502
Equal parts of meal and middlings .....	42	470	107	439

Note how much less food was required to make 100 pounds of gain when a mixture of middlings and corn was fed than when these materials were fed separately. At present prices, for young hogs the mixture can be very properly equal parts, the proportion of middlings being gradually reduced to one-fourth of the ration at the end.

Ground wheat may be substituted for the corn without changing materially the result, provided the wheat costs no more than the corn.

# "BLACKLEGINE"

Pasteur Blackleg Vaccine Quite Ready for Use.

This is in the form of a cord impregnated with the vaccine. Each dose is separate and applied with a special needle. The dose is hitched on to a notch in the needle and then inserted under the skin at the shoulder. The needle is provided with a detachable handle. Vaccination with "Blacklegline" is as rapid and easy as taking a stitch. There is no dissolving, or mixing, or filtering a powder; no injecting or trouble in measuring doses; no expensive syringe outfit.



BLACKLEGLINE OUTFIT. SHOWING NEEDLE INSERTED IN HANDLE AND DOSE OF VACCINE ATTACHED READY FOR VACCINATING.

Prices: "Single Blacklegline" (for common stock): No. 1 (ten doses), \$1.50; No. 2 (twenty doses), \$2.50; No. 3 (fifty doses), \$6.00. "Double Blacklegline" (for choice stock) (first lymph and second lymph, applied at an interval of eight days), \$2.00 per packet of ten double doses. Blacklegline Outfit (handle and two needles), 50 cents.

**PASTEUR VACCINE COMPANY,**  
 Chicago, New York, Omaha, Kansas City, Ft. Worth, San Francisco.

# "Sunny Slope Herefords."

TWO HUNDRED HEAD FOR SALE, consisting of 40 good cows 3 years old or over, 10 2-year-old heifers, 50 spring heifers and 100 bulls from 8 months to two years old. I will make VERY low prices on any of the above cattle. Write or come to see me before buying.

**C. A. STANNARD, Emporia, Kan.**

# Registered Shorthorn Cattle

AND POLAND-CHINA HOGS,  
 Bred and For Sale by **H. A. BARBER, WINDSOR, MO.**

# SHORTHORN BULLS FOR SALE.

Foundation of herd mostly of Bates breeding, Scotch Topped. Herd headed by ORANGE DUKE 3rd, 158521. Call on or address **M. R. AMICK, CALHOUN, MO.**

year, will be missing this season, its place being taken by Ohio.

L. F. THOMPSON, Nodaway County, Mo., reports a big reduction in the number of cattle in the feed lots as at this time a year ago, and that matured swine are scarce.

H. W. KERR of Carlinville, Ill., breeder of Red Polled cattle, in remitting a draft for his bill for advertising in the RURAL WORLD says: "The demand for Red Polled bulls is on the increase. We are making many sales, but can still fill orders. You have the best advertising paper in the RURAL WORLD to be found in the Northwest, judging from my experience."

THE ARMOUR-PUNKHOUSER sale of Imported and American bred Herefords at Kansas City, December 10-11, is one that Hereford breeders cannot afford to miss. Come if not intending to buy. The quality of the cattle to be sold is so high that it will pay one to attend the sale just to see the offering. Send for a catalog, study the pedigrees, and if you don't buy you will come home better prepared to breed good cattle from having seen some of the best specimens of the breed.

**CATTLE RECEIPTS** at five markets in November were close to \$20,000, or about 2,500 below last year. Kansas City, compared with a year ago, shows a decrease of about 47,000, Chicago of 23,000. At Omaha there was an increase of 25,000. At St. Louis a gain of 13,000, and at St. Joseph a gain of 34,000. In 11 months five markets had 6,640,500, a gain of 497,000 over the corresponding period of last year. It was the largest total ever made in 11 months. Compared with the same period last year, there is a gain at Kansas City of about 27,000, at Chicago of about 27,000, at St. Louis of 12,000, at St. Joseph of 45,000; Omaha shows a decrease of 2,700.—Drovers' Telegram.

**HEREFORD SALE AT FORT WORTH.**—Messrs. Gudgell & Simpson, Independence, Mo.; Scott & March, Belton, Mo., and C. A. Stannard, Emporia, Kan., will sell a draft of excellent Hereford cattle at Fort Worth, Tex., on December 17 and 18, consisting of about 150 head, mostly bulls, all young, useful cattle of good quality and in good flesh. Our readers in the Southern States will have a most excellent chance in this sale to get cattle

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**E. J. SMITH, Atty.,**  
 Cameron, Mo.

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**Shorthorn Cattle,** Berkshire Hogs, Angus Cattle, Light Brahms and Golden Sebright Chickens. Stock and eggs for sale. Call on or address **J. J. LITTELL, Sturgeon, Mo.**

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**Lump-Jaw** without the knife. Cure is absolute, and leaves no scar. One bottle cures four ordinary cases. See that you get the real cure. Price \$1.00 per bottle, prepaid. Money refunded if no cure. Send for information.

**Label** **Dana's White EAR LABELS** stamped with any name or address with consecutive numbers. (Empire City recording associations and thousands of practical farmers, breeders and veterinarians use them.) Agents: W. H. B. BARK, To Main St., West Lebanon, N. H.

at their own doors and thus save quite a freight bill. Then it is no small matter to have a chance to get cattle from three such noted herds as are those from which the cattle offered will be taken. Such a chance is not found every day. The leading families will be represented and the animals will individually show quality and usefulness. We question if there will be a better chance soon to buy cattle of the same quality and breeding, and that right at home. Send for a catalogue and don't forget the date of the sale.



## Horseman



Expedition 2:15, son of Electioneer, put in the 2:30 last the past season; Export 2:25, Marique 2:14, Petrolia 2:30, and of his get Escobar reduced his record from 2:15 to 2:10, and Mary P. Leyburn, 3 years old, from 2:21 to 2:15.

The Palmyra (Mo.) Fair Association has elected the following officers for the ensuing year: President, R. L. Boyles; vice-president, J. W. Lemmons; secretary, Geo. B. Thompson; treasurer, A. R. Spencer. The next fair will be held the week preceding the St. Louis Fair.

"Breeder of New England are now raising just as good trotting stock as can be found in any section," says The Horse Breeder. "Horses raised here do not mature so early as some, but they last well when matured, and train on year after year better, as a rule, than those that are forced when young."

During the Chicago horse show J. H. Moore bought the black stallion Dr. Pitzer for \$3,000. He will be mated with The Laird, a horse with Morgan blood, being by a son of Daniel Lambert, and the pair will be exhibited in the heavy harness classes at the coming horse shows. The pair is said to represent an outlay of \$14,000. Dr. Pitzer is by Aracene, son of Alcycione. He stands 13.8 and weighs 1,175 pounds.

During 1901, 98 horses, the get of 59 different sires, trotted into the 2:15 list. The dams of these 98 new comers were got by 80 different stallions. Nine sires got two or more new 2:15 performers, while Wilton and Red Wilkes were tied for first honors, each being credited with four. Kentucky Prince, Onward and Princess have three, and Director, Harold, Nutwood and Stamboul two each. Nutwood is now the sire of the dams of 23 2:15 trotters.

"There are now so many road horses being kept in New York and Brooklyn that it is a difficult thing to find a vacant box stall. Quite a difference from about four years ago, when stablekeepers were hustling around to get boarders, and making all kinds of concessions in order to keep them. It is the 'passing of the horse,' sure enough," writes Frederick Watson in The Horse Breeder, "only instead of passing into oblivion he is passing into unlimited popularity and prosperity."

An exchange recommends for a halter pulling horse that a long halter strap be buckled or tied around the horse's fore leg just above the knee, pass strap through one ring of the bridle, and the other end to a hitching post. Another method sometimes employed is to make a crupper out of a strong piece of rope and pass the other end through the ring of the bridle or through the halter and then tie. A few good strong pulls on the part of the horse usually discourages it in halter pulling.

The past season has been the greatest in history for the small breeders and the unsyndicated drivers of small means, says The American Sportsman. The biggest money winners were those who were out "on their own hook." The million dollar stock farm owners, with high-salaried drivers, are no longer a menace to the profitable expansion of the harness turf. Even in the dimmest field of endeavor, the Grand Circuit, there is room enough for honest and meritorious competition. And in no Grand Circuit, for the past 15 years, have the big money winners been more generously distributed among the turfmen of moderate incomes than during the season just closed.

Attention is being called to the large number of horse show winners that carry the blood of Belmont, says the Horse World. There is nothing strange in this to any one who is familiar with the characteristics of Belmont's family. No other branch of the Hambletonian family has furnished more good looking, high acting horses than this one. With good looks and the ability to act well a certain amount of vim is needed to enable the other qualities to be seen at the best advantage, and the Belmonts have it. Indeed, it has been said that members of Belmont's family were a little too fiery to be pleasant race horses, and while that may have been true in some cases, that same fiery disposition is just what is needed in a show horse.

Peter Stirling, the fast young gelding, is by Baroness 2:14, a son of Baron Wilkes 2:18, his dam being Medo by Cooper Medium. In addition to being the dam of Peter Stirling this mare is also the dam of Black Bolt 2:13, and Marble 2:14. Peter Stirling is the winner of the Kentucky Futurity, also the Louisville Prize, earning \$15,000 in these two races and proving himself to be one of the fastest and smartest trotters of the season. In the second heat of the Kentucky Futurity he and Walnut trotted to the half in 1:45, the second quarter being trotted in 30 seconds. Previous to the Lexington meeting Peter Stirling won three races over the western tracks, never losing a heat. He is owned by the Riverside Farm, of Berlin, W. Va., and was trained and driven to his record by J. B. Chandler.

Little Squaw, the pacing mare which in the hands of an amateur driver and hitched to a wagon established a record of 2:06 in the Memphis track a few days ago, is what horsemen call a "find." Numerous conflicting stories regarding her early history have been floated by the newspapers. Her present owner, Oscar Ceideburg, three years ago, was considering the purchase of a team of mules

from D. D. Hastetter, then a resident of Wellsville, Kan. The latter, as an inducement, for an additional \$5, agreed to "throw in" a miserable looking filly which was running in a nearby lot. The trade was completed. Ceideburg is one of those persons who continually talk horse and speed, and it was only through his fancy that the unprepossessing filly ever became prominent in racing circles under the name of Little Squaw.

Early Thursday morning, November 14, the grandstand and buildings at the Columbus Driving Park, Columbus, Ohio, were destroyed by fire. The loss is estimated at \$25,000. Buildings will be erected at once. On Wednesday afternoon a stableman was ordered off the grounds by Superintendent Johnson. When he complained with the demands of the superintendent the stableman made the remark: "It would be a good thing to put the torch to Johnson and burn him up." The police are looking for this man, as they believe he returned to the grounds and fired the buildings. There were no live electric wires leading into any of the buildings and the superintendent of the grounds, Superintendent Johnson, was dragged out of bed by a trainer, who discovered the fire. He would have been incinerated but for the work of the employees.

Smuggler, in his old age, was once sold at auction. Stamboul was sold shortly after his championship record of 2:17 (which was afterward rejected) was made, and he brought \$40,000, despite the fact that scandal was already busy with stories of the illegality of his performance. Directly now comes the black and the king of stallions to pass under the hammer—and under such conditions that he is the real "horse of the sale"—the one upon which the greatest interest centers. In these "boom days" his sale sold privately for \$75,000—and considering the prices then paid publicly for other horses, he would probably have brought as much or more, under the hammer. He was then 15. In 1884, long before the "boom days" dawned, Dictator, the grand sire of Directum, brought \$25,000 at private sale, when 21 years old. What is more, it was a profitable purchase. Dictator lived to be 30. Dictator is still living and potent, and will be 35 next spring. Directum is now but 12 years old. What will he probably bring?

As facts come out regarding the Canadian pacer, Harold II, it becomes more and more apparent that he is one of the most remarkable of the horses that have trained on to records below 2:05, says The Horseman. This gelding, that heads the list of the new 2:10 pacers for 1901, made his first appearance in public at London, Ont., in June, 1901, since which time he has won fifteen races and been only twice unplaced out of a total of twenty starts in two seasons, earning almost \$10,000. What is quite a feature of his eventful career is the fact that in 1899, when a five-year-old, he possessed no speed and was held in such little regard that he changed hands for \$150. And the following year, when he came out at London and won his maiden start from a big field in straight heats, he had not shown enough to warrant his owner to keep him in preference to the \$700 that was offered for him by his present owner. His speed after that must have come like lightning, for the end of the 1900 campaign found him better than a 2:10 horse, and his flights of speed, particularly at Terre Haute, where he paced a half in a minute and a quarter in 28 seconds, indicate that he has not yet reached the limit of his speed.

There is neither sense nor reason in selecting a poorly shaped stallion for use as a stock horse, yet many breeders persist in using ill-formed stallions and expect to get shapely colts. It is a fact that can not be disputed that trotting bred horses are the best high-acting heavy harness horses in the world, and breeders should recognize this fact in their breeding operations, says the Western Horseman. There will always be some poor trotting bred horses, and they will not all be fast trotters, and there will always be bad individuals among horses, but by the careful selection of a stallion with size, substance and style, breeders are more apt to get colts of the same pattern. Trotting bred coach horses win the majority of prizes in the horse shows, and they also bring very high prices, and the breeder who succeeds in breeding the race meeting, says the Western Horseman. Work was begun on the track November 11, so if the weather permits it will soon be completed. They have a fine location one mile northeast of town. There are quite a few matinee horses there now, and the track will be kept hot next year. Chas. S. Wheeler is located at the La Plata track with four heads, as follows: Chestnut filly (2), by Billy Sample, 2:14, owned by Wm. Britton, can show a 2:30 gait; a fine grown four-year-old colt, owned by M. D. Campbell, of Macon, that can step some; a four-year-old bay colt, owned by Roy Fox, that can show a three-minute gait after only twenty-one days' work, and a two-year-old colt, by Sir Knight, owned by C. C. Wood, of Macon. Wm. B. Bragg is now the owner of Bashawmont, 2:25, by Belmont. W. S. Sears has in his stable Bonnie Thomas, 2:13; Walker S., 2:28, and Bonnie Medium, that has shown 2:15 speed; also Carol Wilkes, 2:25, by Ashland Wilkes. Bonnie Thomas started as a green horse this spring, was entered in nine races and was only behind the money once, that being the result of a wheel going down. He was only beaten a head in 2:15.

It is evident," writes "Veritas," in Trotter and Pacer, "that the western trainer, J. B. Chandler, developer of Peter Stirling (3), 2:13, is a master colt handler. Born in Ohio, nearly 60 years ago, Chandler showed by his work with Peter that age increases the knowledge and perfects the skill of the expert colt handler. His notable success with colts first came to light in Nebraska, where he made decided hits in handling Ontonagon, Collins, Belle Acton, The Conqueror and others to remarkably fast colt records. During an interview with him when he

was chief trainer at E. D. Gould's Woodbine Farm, Fullerton, Neb., in speaking of early training of colts, he said to us: "I use the miniature track and find it preferable to leading alongside a pony. The little track teaches the colt to go free and depend on himself and it saves a lot of labor, as it is handy to get all the colts ready that we can find time to work. We aim to put the youngsters in harness as soon as they seem able to pull a bike. Our rule is to brush, brush, nothing but brush, till we make enough speed to go to the races. In this way, if the colts are bred and built right, we get many a one able to show quarters in from 23 to 24 seconds. After this it is a question of ability to take fast work and to test them to see how far they will carry the clip, free from distress or overdriving. But great care must be used in giving brushy work to spirited, good feeling colts so as to avoid making them pullers and bad actors. We avoid road work for colts and take them to the track every time they are put in harness, and if we do not want one to go faster than in his previous lesson we would not hitch him up. We are often asked, 'Do you speed them every day?' and answer, 'If you were sending your child to school, which way do you think he would learn the faster, to go every day or once or twice a week and fish the rest of the time?'"

### BLUE BULL NOTES.

By L. E. Clement.

Editor RURAL WORLD: Thanksgiving Day, Thursday, Nov. 29, 1901, I had a ride behind the only Blue Bull stallion in the state; and the handsome horse of any breeding in the State of Missouri—Cambridge, son of Wonder, a fast trotter and a perfect horse. He is owned by Billy R., son of Major Somers, dam by Octocorn. This horse is speedy, and has a three-year-old, double-gaited filly out of Minnie C., by Rushville, son of Blue Bull, belonging to Mr. Thomas and being handled for speed at the pace.

At Ft. Scott, Kan., I saw four colts by Nutcracker, belonging to C. A. Dunkerton; two of them are yearlings, a weanling, and the best gaited two-year-old I ever sat behind. Mr. Dunkerton says he knows nothing but trot and has never made a break since he began driving her.

Jim Elise has bought a black two-year-old filly by Walnut Boy, 2:14, dam Charm, by Trusty, second dam Bonnie C., by Joe Elmo, third dam by Blackwell's Hambletonian. Elise thinks this mare and his Happy Riley colt are a pair hard to beat.

O. Spencer, of Rich Hill, Mo., has some good colts by his Grattan horses. A three-year-old by McGrattan, out of Koney, will be trained for the races next year. The gray mare Toney, by Blair 1889, has three colts all great lot trotters. Babe, by Goodwood 228, has a very large two-year colt by McGrattan. Among these there should be some good prospects.

Grattan gets no credit in 1901 except the two reduced records of the trotter McGrattan and the pacer Gratt, both of which reduced their records. McGrattan either got a gravel in his foot or bruised it in one of his races. Soon after his return home it broke home the foot and has given him serious trouble.

John T. Withers is driving his Prince Midway mare. Mr. Withers has bought 240 acres of farming land in Vernon county, and will breed Duroc-Jersey hogs and Shorthorn cattle, start the horses when opportunity offers, and manage a mercantile company that gets their part of the business.

Frank Ervin is back from the races and expects that Murray How did not give him a fair deal in the mule race at Memphis, and gave the cup to a running mule when his entry was the only one that trotted over three-fourths of the mile. Next time if "The Old Campaigner" does not keep his weather eye open for gait, Ervin will protest and bring up proof that there is a difference between runners and trotters.

Nutcracker is one of the best sires of individual colts in the State of Missouri, and people all around Nevada are finding it out.

E. T. Campbell, of Girard, Kan., is breaking some nice looking colts by Meribrook, 2:30. They are the kind that sell well. His partner, Ed R. Dorsey, was breaking a filly by Bonnie McGrattan, dam Sometime, by Belongs, second dam by Strathmore. This mare has three in the list, and Mr. Dorsey paid the Frost Stock Farm \$300 for a yearling brother to this filly.

Ed. Crabb has a nice Walnut Boy colt, dam by Allie Russell, second dam Besse, by Goodwood, dam of Redwood Redmon, sire of Blonda Redwood, 2:11.

W. E. Gibbons is driving a yearling by Antares, dam by Ben Mcgregor, second dam by Bolt, and dam of Harry W., 2:24.

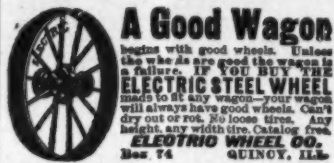
General Boaz, by Boaz, son of Onward, dam by Onward, has been put to pacing and is quite promising. He is string some good colts.

T. K. Lisle & Co. are breaking a two-year-old filly by General Boaz, dam Necklace, by Hector, second dam by Onward. They are keeping a three-year-old stallion by Necklace, sired by Silver Simon, 2:16.

J. C. Clark has a four-year-old by Dr. Cox, dam Allie Allison, by Andrew Allison, second dam June, by Al Beamer 1463, by Corbin's Bashaw, out of Caltha Robertson, dam of President Wilkes, the farm have a pair of horses when mares they are breeding to Dr. Cox. Both are throwing speed. A two-year-old black sister to Allison Cox is a natural trotter and trots in harness as well as she does in the lot. Bates county, Mo., has plenty of material for record-breakers.

### THE CHRISTMAS HORSE REVIEW.

Of the several turf publications that issue a special holiday number, the "Horse Review" has been a leader. Year after year the Christmas "Review" has been a welcome visitor to our exchange table, and we have invariably found each edition an improvement on its predecessor. The pictorial features, the special



contributions by writers of note, the stories of the great horses of the year, and, above all, the statistical tables, which practically ante-date the Year Book, we are assured will be of unprecedented character. The Christmas "Review," while of absorbing interest and unquestioned value to horsemen, professional and amateur, is meant also for the family. There is meat in it for the general reader, humor and pathos, some of the ablest pens giving their best thoughts to its pages. The Christmas "Review" will be issued Dec. 10, at the usual price, 25 cents per copy, which includes all the beautiful supplements. For copies, address "The Horse Review," 919 Masonic Temple, Chicago, Ill.

### REGULARITY OF EXERCISE.

In writing about the care of horses an eminent English army officer has the following to say:

"Regularity of exercise is an important element in the development of the highest powers of the horse. The horse in regular work will suffer less in his legs than another, for he becomes gradually and thoroughly accustomed to what is required of him. The whole living machine accommodates itself to the regular demands on it, the body becomes active and well-conditioned without superfluous fat, and the muscles and tendons gradually develop. Horses in regular work are also nearly exempt from the many accidents which arise from over-freshness. As a proof of the value of regular exercise we need only refer to the stage coach horses of former days. Many of these animals, though by no means of the best physical frame, would trot with a heavy load behind them for eight hours at the rate of ten miles an hour without turning a hair, and this work they would continue to do for years without even being sick or sorry. Few gentlemen can say as much for their carriage horses. No horses, in fact, were in harder condition. On the other hand, if exercise be neglected, even for a few days, in a horse in high condition, he will put on fat. He has been making daily the large amount of material needed to sustain the consumption caused by his work. If that work cease suddenly, nature will, notwithstanding, continue to supply the new material; and fat, followed by plethora and frequently by disease, will be the speedy consequence."

### BARON WILKES, 2:18.

The Wilkes family has for several years past led every other branch of the Hambletonian family in the production of race winning trotters and pacers, says "The Horse Breeder." The close of each season shows it farther in the lead than the preceding one. It is unlike some of the other families in one respect. It is not dependent upon any one strain of blood to produce a nick.

A majority of the most successful sons of George Wilkes as sires of race winning speed, however, have been from dams that were by Mambrino Chief, or by Mambrino Patchen, the best son of Mambrino Chief. There are several exceptions to this. Three most notable are probably Wilton (2:19), Gambetta Wilkes (2:19), and Ambassador (2:14).

The Wilkes-Mambrino Patchen combination is the most popular one among the majority of progressive breeders. Three sons of George Wilkes, that were out of mares by Mambrino Patchen, have done stud service in New England, and all three of them have proved remarkably successful as sires. They are Alcyrone (2:27), Alcantara (2:30), and Baron Wilkes (2:18). The first named has been dead for several years. Alcantara is somewhere in the Middle West, but Baron Wilkes (2:18), hale and hearty, is owned by Messrs Col. J. E. and his brother, Hayward Thayer, and is kept at their Maplehurst Stock Farm, Lancaster, Mass.

No other stock now standing for service in New England has had over so many of the Eastern states, carries more of the blood of George Wilkes, or has resembled him more closely than Baron Wilkes (2:18). No living son of George Wilkes has ever been more popular as a sire than Baron Wilkes is to-day. No other son has produced so many descendants which have won that rich and much coveted event, the Kentucky Futurity for three-year-olds, and for two-year-olds, as has Baron Wilkes.

Oakland Baron (2:04), by him, won the Futurity for three-year-olds in 1895. China Silk, by Prodigal, dam Brown Silk, by Baron Wilkes, won the two-year-old Futurity in 1896.

Pereno, by Moko, a son of Baron Wilkes, won the two-year-old Futurity in 1899, and Estuary, a son of Baron Wilkes, won second money at the same meeting in the three-year-old Futurity.

Pereno, winner of the two-year-old Futurity in 1899, won the three-year-old Futurity in 1900.

Peter Stirling, that won the three-year-old Futurity on the 8th inst., is by Baroness (2:14), a son of Baron Wilkes.

Oxford Boy, that won the two-year-old Futurity on the 11th inst., is bred to Baron Wilkes. Red Chute, the sire of Oxford Boy, is by Baron Wilkes (2:14), out of Baroness, by Baron Wilkes. Laurina, the dam of Oxford Boy, is a Stamboul (2:07), and out of Bon Bon, by Baron Wilkes.

Such a record is a great honor to any horse. No other stallion has ever accomplished even half as much as a progenitor of winners of the rich Kentucky Futurities. It is fortunate for the breeding interests of New England that Baron Wilkes is owned here in Massachusetts.

### FEED THE COLTS.

The most profitable investment any horse breeder can make is in good, wholesome growth and tissue-producing food for his weanling colts. The future usefulness and individual perfection of a youngster depend more largely on his environments the first year than on any subsequent year of his life, and at no period of a foal's life can the breeder more cheaply and profitably put on growth and subsequent value than during the first year, says the Western Horseman. The critical period with a foal is the first winter, just following weaning, when a change of food and going out of pleasant weather to that of the vicissitudes of winter, unless accompanied with good care and feed, result in its getting

a serious set-back in physical growth and development. If a weanling is worth wintering at all it is worth wintering well. Many breeders wonder why it is that no one seems to want to buy their youngsters, while other breeders, with no better bred ones, can scarcely keep a youngster on the place till it is two years old. The difference nearly always comes from the difference in feed and care, the good feeder and good caretaker having larger, better looking and in every way more promising yearlings than his careless and indifferent neighbor has two-year-olds. It actually costs but little more to winter a weanling well and keep it growing than it does to let it "root, hog, or die." Besides, if poorly kept, it comes out of the winter in ill condition, poor and "scrawny," and so stunted in development and growth that it not only ever after costs more to keep, but never makes the mature animal that it would have done had it been properly wintered. Size and finish bring more money nowadays, and these qualities come only through good feed and care.

Dr. S. A. Tuttle. Alton, Feb. 1, 1898.

Dear Sir—Twenty-two years ago I had lung fever, after which I had pneumonia, and for four weeks there was no action in my left lung, and I was unable to leave my room for eleven weeks. I had to wear a plaster on the back and front of my lungs, if not, in 24 hours I would be so hoarse that I could not speak aloud. I have great difficulty in breathing. Last fall your agent, H. O. Tuttle, overtook me and asked me to ride, and I said I did not know as I could get home. I said to him I had about made up my mind that I should not do much more work. He advised me to use Tuttle's Elixir. I have used nearly three bottles. I have never found anything that will relieve me like that. I have done more work this winter than I have done before for a long time. I cannot speak too highly in its praise for what it has done for me. Yours truly, JOHN BERRY.

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### -100- SHORTHORNS

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Camp Creek Herefords

Young stock for sale. Inspection invited. Call or write, LOUIS WEISBERG, Truxton, Lincoln Co., Mo.

### CEDAR VIEW AND GROVE HILL SHORTHORNS.

Gay Laddie 119, 90 at head of herd. Young stock for sale. Call or write. FOWELL BROS., Lee's Summit, Mo.

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One stock, 177 Yearlings and extra. L. K. HARRINGTON, Dorchester, Greene Co., Mo.

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### LARGEST FOUR YEAR OLD HORSE IN THE WORLD

WEIGHT 2500 Lbs., Age 4 Years, PERCHERON. Owned by International Food Co., Minneapolis, Minn. We feed "INTERNATIONAL FOOD" every day to our four stallions, brood mares, colts, etc. "INTERNATIONAL FOOD" makes them fat, healthy, and strong. It is sold on a spot Cash Contract to Robert Young, 1891, and famous Black Stock in service. Choice young bulls and females of the richest breeding and individually first class for sale. All leading families represented.

It will make you extra money in growing, fattening and slaughtering. It is sold on a spot Cash Contract to Robert Young, 1891, and famous Black Stock in service. Choice young bulls and females of the richest breeding and individually first class for sale. All leading families represented.

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It will make you extra money in growing, fattening and slaughtering



# Home Circle

SINCE WE GOT THE MORTGAGE PAID.

'We've done a lot of scrippin' an' a-livin' hand-to-mouth. We've dreeded too wet weather an' we've worried over drouth. For the thing kept drawin' interest, whether the crops were good or bad, an' raisin' much or little, seemed it swallowed all we had. The women folks were savin', an' there ain't a bit of doubt. But that things they really needed lots of times they done without. So we're breathin' somewhat easy, an' we're feelin' less afraid. Of Providence's workin', since we got the mortgage paid. I wish I'd kept a record of the things that mortgage ate, in principal an' interest, from beginnin' down to date. A hundred dozen chickens, likely fowl with yellow legs. A thousand pounds of butter an' twelve hundred dozen eggs. Some four or five good wheat crops, an' at least one crop of corn, an' oats, an' rye—'t swallowed in its lifetime, sure's you're born. Besides the work an' worry, ere its appetite was stayed, an' they were contented, since we got the mortgage paid.

We've reached the point, I reckon, where we've got a right to rest. An' lo! our an' visit, wear our go-to-meetin' best. Neglectin' nothing urgent, understand, about the place. But simply slowin' down a bit, an' restin' in the race! In time I'll get the windmill I've been wantin', I suppose. The girls can have their organ, an' we'll all wear better clothes. For we've always pulled together, while we saved an' scrimped an' prayed. An' it seems there's more to work for since we got the mortgage paid.

—Roy Farrell Greene.

Written for the RURAL WORLD.

WHAT ARE YOU GOING TO STUDY?

Now that "the frost is on the pumpkin, and the corn is in the shock," the older boys and girls of our farm homes are preparing to enter school. There is so much liberty permitted in selection of studies, that many times there are nearly as many classes as pupils. There may be certain branches for which a girl may not have a taste. If these are not reading, writing and arithmetic, the parent very often sympathizes with the child. If John doesn't like grammar and doesn't see any sense in it, why mother says he needn't study it. If Mary thinks geography nonsense and doesn't want to enter the class, why papa says: "I didn't study geography, and I got along just right, and Mary needn't study it." The writer has frequently had such problems to solve and has even had awake nights to plan how to win these children to do what would be best for their future welfare, and have them willingly pursue studies which they themselves had taboed.

The grammar proposition was always the most difficult. Yet nothing is so important. Children learn arithmetic because it is almost considered a disgrace not to have such knowledge of figures as will enable one to do business. If one does not have it he is soon made conscious of his own deficiency, and so will learn. But a boy can make himself understood and yet hardly utter a correct sentence. He does not know how harshly his uncultured language grates on the ear of the very persons he most desires to have his good will of. A boy may be able to solve difficult problems in mensuration, and a girl explain the whys of the rule of cube root; but seldom will there be a chance outside of the schoolroom to air this knowledge. Yet, every time a child makes a statement he betrays his knowledge or lack of knowledge of his mother tongue.

In later years, when success has crowned efforts to secure a good financial condition, society will be apt to say, yes, they have money, but they are so illiterate. If one talks correctly among other defects in education may be concealed. No teacher has conscientiously done his or her duty who has indifferently excused a child from studying grammar. The teacher holds a state position and owes a duty to its future citizenship, and to the child who is not old enough to comprehend the importance of the correct use of language. The fact is, it is the basis of all true education. I am glad these days that language rather than grammar is being taught.

The boy or girl who is ambitious of reaching beyond a present environment should make most of this language training. If I had a child too frail to pursue the entire course, I would have its work confined to language, and trust to future years for having it acquire other necessary training. Let the language class be the important one. If this winter the boys and girls acquire a sense of importance of this study, much will have been done for them. A young man or woman who can couch sentences in good English, and whose English will have a passport to the best society, for with this knowledge there is almost invariably polite manners. The bulky usage and bad grammar.

MRS. MARY ANDERSON.

Caldwell Co., Mo.

Written for the RURAL WORLD.

TIMES DOWN IN ARKANSAS.

While the sisters have been writing about their "little drouth peaches," and bawling their parched up flower and vegetable gardens, I have been waiting until "the returns were all in," and all the time reveling in peaches and apples that were not drouth productions, but big, red and luscious, like old Arkansas always produces. Ah! let me tell you, you who were lately hunting new homes away Arkansas the "wo hy" because you had heard so much about "Rackensack," that by doing so you missed the tide which, if you had taken at flood time, would have led you on to solid comfort, and which, if it be not fortune, is at least close kin. For though it was a long, hot summer, and things did get pretty dry, there was plenty of water always in our living springs, and there was at all times sufficient rainfall to keep the gardens growing—where they were worked, and the roads were kept down. We have such long, delightful



## Lion Coffee

is likely to be used for glazing coffee? If you know, you would be sure to demand

The sealed package insures uniform quality and freshness.

autumn here that there is plenty of time before frost to have a good late garden. In the fields are grown second crops of potatoes, peas and "goobers." Speaking of "goobers" reminds me to say that the most wonderful of all the peonies are the Spanish. Though the nuts are very small, they make up in quantity what they lack in size, and they are delightfully sweet and pleasant flavored, and will make an enormous crop under almost all circumstances, and on any kind of soil. Everything on the place likes them, from the children to the farm horses; the latter will leave any other kind of feed for "goobers" when they are fed to them tops and all.

The second crop of Irish potatoes has passed the experimental period, and they are now grown on almost every farm. They are planted about the middle of July, from seed selected from the first crop, which is harvested the first of June. The second crop is being harvested at the present writing. We had not frost enough to kill the vines until about the tenth of this month (November). Farmers who are "forehanded" are not short on feed, though they passed through a distressing drouth in the past summer, for such drouth-resisting forage plants as Kaffir corn, sorghum (hay), field peas and peanuts gave them an opportunity to provide plenty for the winter; to say nothing whatever of sweet potatoes, which make such excellent feed for both man and beast, for as with the "goobers," every living thing on the farm likes sweet potatoes, and as an old farmer said the other day, "the only way to fall on sweet 'taters was down here is not to plant them." We have them here on our place, of all kinds and varieties, from the big Bermuda (stock potato), that one has to cut up with an ax, to the small yellow yams, or "nigger-chokers," that stew out molasses in the pan they are baked. We debated whether to put Mrs. Tabor's article on this page or where the men would be more likely to read it—Editor.

Written for the RURAL WORLD.

CAVE REMINISCENT SKETCHES.

The Mysterious Coiner.

On a dark and stormy night in those other years the cave fronting the Cave was dimly illuminated by the flickering rays of a light that reflected from the interior. A closer scrutiny revealed a dark-bearded and bronze-faced man of middle age, industriously at work, and so intensely occupied as to be unobservant of surrounding influences. While he was thus engaged in fancied security, two men were noiselessly wending their way from the head of the Hollow. They very cautiously approached the Cave, viewed the situation and prepared for action. One of them slowly approached the secret worker, while the other stood guard. Suddenly the man at work felt a hand grasp his shoulder and jumped to his feet, ready to face a revolver. Resistance was useless and he was soon a prisoner. The developments solved a problem that had long engaged the attention of the people of Southern Illinois. For months the country had been flooded with spurious coin. Every effort to discover its origin had proven unavailing. Its circulation increased and caused considerable disturbance and loss. It was finally coined and difficult to detect, except by experts, consequently many into whose hands it came suffered through its machinations. The discovery and capture of the secret coiner at the Cave revealed the manner of its manufacture and mode of circulation. A complete set of dies and every accessory needed for the accomplishment of perfect coinage was found, including hundreds of dollars of counterfeit coin. The coiner had at one time been employed in one of the government mints and was eminently skillful in the work. He would do the work, occasionally assisted by his accomplices, of whom there were but a carefully selected few, whose business mostly was to put the products into circulation for mutual benefit.

The capture of the principal led to the arrest of several of his associates, and the annihilation of the band. The dies and accessories were delivered to the government. The men served long terms in the pen. The chief artist was given a life sentence and died in prison.

Effingham Co., Ill. DYPE.

THE WISE FARM WIFE EXALTED.

Miss Nannie Vickroy of Macon, Macon Co., Mo., has been awarded a prize for the best answer to a question put to 300 school teachers, in her county, says the Atlanta "Journal." The question was: "Who is the Greatest Woman in All History?" and Miss Vickroy's answer was as follows:

"The wife of the Missouri farmer of moderate means, who does her own cooking, washing, ironing, brings up a large family of girls and boys to be useful members of society, and finds time for her own intellectual and moral improvement is the greatest woman in all history."

Miss Vickroy's conclusion not only applies to Missouri women, but to women the world over.

Written for the RURAL WORLD.

A FLOWER GARDEN IN BRITISH COLUMBIA.

Well, of course, the doctor said "thou shalt not," when I wanted to write, but here I am any way. A woman has to talk or write when she feels like it, no matter what the penalty may be. Oh, you would never know by looking that there was anything wrong with my eyes, but I have been having serious trouble with them, and was totally blind in the right eye for three weeks. "Overwork," the physician said, "nothing will do any good except absolute rest."

Well, those words—"absolute rest"—are not on my books, so what can I do? We never know how great our blessings are until they are gone. During those dark days of pain, I wondered why I had repined and fretted, and acted like a naughty child when things had gone wrong with me, and I said, if I ever see again I will try to be good with all my might. The work was taken away just when I was planning and hoping for so much. Well, maybe there were grave mistakes in that work; anyway, it is best to leave it with One who tries us all.

I would rather say with McKinley, "It's God's way, his will be done," than wear an emperor's crown; but we do not always say it and mean it, I am afraid.

I wish my friends could sit by me and look out of my window to-day. Yonder to the south is the sloping mountainside where the little old men, some distance away. How many times we have laughed over the dear sweet things—baby Charlie and I. "Come and see him, mamma, he has got his bonnet on." And the rippling baby laugh was good to hear. Then there are the dainty white sweet alyssum, like drifting snow; camellias and chrysanthemums (just one plant of this last but bending beneath a wealth of every living thing on the farm like a sultan, a splash of gold among the other rich colors in the flower beds; carnations with their buds all ready to burst into loveliest pink blooms, ten week stocks in all colors; marigolds, velvety, rich and dark; the flowers our grandmothers loved, our mothers ignored, and which the daughters are now cultivating again. I have one in the house with 70 buds and flowers on it, but one help of dill seed and the perfume. One pink hollyhock alone is left. The raindrops make one think of tears for her loved and lost as they fall softly down. Then sweet peas galore are in bloom.

Then I have some strange sweet flowers, which I have failed to find names for in the catalog. Perhaps they are from Japan. They were not labeled. They are here in rare colors and bewitching beauty. There are a few double daisies left among the green. I am glad we have such a sheltered nook, for only across the lake we can see the newly fallen snow, and we know that while our floral treasures may last until Christmas out of doors, they may go in a single night. One dislikes to think these sweet familiar faces we have loved so tenderly, must bow beneath the ice king's cold blast. I have carried many inside, and filled windows in kitchen and parlor with them.

The waves on the lake roll up in white caps to-day, and clouds of geese and ducks are going north. The hunters' guns wake the echoes on marsh and lake land, sounding the death knell of many wild fowls.

ELLA CARPENTER.

Whitcomb Co., Wash.

The Home Circle readers will be sorry to learn by the foregoing that our much beloved Ella Carpenter has had an affliction that threatened serious results; but will rejoice to hear again from her, rejoicing doubly because it is evidence of recovery from the trouble with her eyes. Yet we are inclined to protest and say that, notwithstanding the pleasure her letters afford our readers, we are sure they will forgive her for being longer rather than that she should by writing jeopardize the full recovery of her sight.—Editor.

DOWN ON THE FARM—A FABLE.

A farm lad wanted to escape the drudgery, so he went up to the city and after he had been there for fifteen years he had a nice position. He stood on his feet from 8 to 5 every day, wrapping up dress goods and after he had paid his board and room rent there was nothing left of his salary except the crust. After many years he went back to visit his brother, who had remained on the farm. He found Jed in a hammock, reading a crop report.

"Why are you not working?" asked the commercial brother.

"What is there to do?" asked Jed. "The windmill is pumping water for the stock, grinding up the chop feed and working the churn. I finished my fall plowing yesterday."

"Plowing is hard work," said the city salesman, sympathetically.

"Oh, I don't know," replied Jed. "I use a riding plow, with a white umbrella over me and a cushion on the seat. You may not know it, but the farmer is getting too strong to work. You can't make him use a walking plow any more. He plants his corn with a check-row machine, lifts his hay with a patent fork, cuts his grain with a self-binding machine, has a bundle carrier attached and then puts it through a steam thrasher that cuts the bands, does the feeding, measures the grain and dumps it into the wagon and stacks the straw. I suppose about next year they'll have some dad-binged attachment that will go up to the bank and cash the grain tickets. The lowly agriculturist now has his telephone and daily rural delivery and a rubber-tree buggy, and when he meets an ordinary dry goods salesman such as you he just cracks his \$2 red whip and drives right over him. Don't you come out here pitying the poor farmers! We've got everything you have in the city except the noise. I'm going to put golf links in the west forty next year. Then, as soon as they give away an automobile with 100 tobacco tags and somebody gets up a corn shaker that will do the work, I'll be fixed."

Moral: The department store employee is not the only one who has a snap.

GEO. ADE.

The Christmas number of the "Woman's Home Companion" will contain the beginning of a series of articles on "Women in War." The first will deal with the heroism and devotion of women in the battles of the Rebellion.

## LIVE, LEARN, LABOR, LOVE.

Live in the light of the truth that hath found thee, Live as the ocean lives, sparkling and broad; Live for the thousands who perish around thee, Live for thy country, eternity, God. Live for the past with its eloquent history, Live for the present, it soon will have fled, Live for the future enshrouded in mystery; Live while you live e'er you sleep with the dead.

Learn to look up when temptations assail you; Learn to do right whosoever may laugh, Learn to distrust the delights that regale you; Learn from guilt's chalice, oh, never to quaff, Learn to rebuke each unhallowed emotion; Learn to thyself to be loyal and just, Learn to make duty thy shrine of devotion. Learn not in man, but thy Savior to trust.

Labor for that which is highest and purest, Labor for that which is noblest and best; Labor for Him who of friends is the surest; Labor till death brings thy guerdon of rest. Labor in earnest thy work is around thee; Labor unwearingly on to the end. Labor in worship and angels surround thee; Labor to cheer thee and fly to defend.

Love mid aspiration, neglect and disaster; Love in the sunshine as well as the storm. Love above all thy Exemplar and Master, Love Him with constancy, tender and warm. Love not of sorrow her venture to borrow, Love in the day—spring of Heaven to roam.

Love not self or sin and in earth's glad to-morrow, Love everlasting will welcome thee home. I have written this from memory for the RURAL WORLD readers. I do not know the author. I learned it to recite at school one Friday afternoon—some years ago. I would like to know the author.

PEARL M.

SATISFACTORY SALTING OF BEEF.

Beef salted in the following manner will keep well: Cut the meat up as soon as cold and put in a cool place where it will not freeze, to "ripen" for four to eight days, according to the age of the creature. If a two-year-old, five days will suffice. The "ripening" period completed, set on the stove an iron boiler two-thirds full of water, and the moment it boils furiously put into it as many pieces of meat as the receptacle will hold. Put on the cover and allow the whole to cook about 10 minutes; then take the meat out and replace it with some more for the same length of time, being sure that the fire is good and the water boiling well before placing in the meat. Thus continue until you have treated all the meat that is to be corned. The result of this process will be the closing of the pores of the meat on the outside, which will prevent the juices going into the boiler. The brine should be made of two ounces of salt-petre, two pounds of brown sugar, six pounds of coarse salt and four gallons of water. Heat these thoroughly, and while boiling hot apply to the meat, after it has been packed in a good barrel. Place a weight on top of the meat. It is always of vital importance that corned meat of any kind be kept submerged.

FRED O. SIBLEY.

WHITTIER'S DOG.

During one of the last birthday celebrations of the poet Whittier, he was visited by a celebrated oratorical singer. The lady was asked to sing, and, seating herself at the piano, she began the beautiful ballad, "Robin Adair." She had hardly begun before Mr. Whittier's pet dog came into the room, and, seating himself by her side, watched her as if fascinated and listened with a delightful eagerness in an animal. When she finished he came and put his paw very gravely into her hand and licked her cheek. "Robin takes that as a tribute to himself," said Mr. Whittier. "He also is 'Robin Adair.'" The dog, hearing his own name, evidently considered that he was the hero of the song. From that moment, during the lady's visit, he was her devoted attendant. He kept by her side when she was indoors and accompanied her when she went to walk. When she went away he carried her satchel in his mouth to the gate and watched her departure with every evidence of distress.—St. Nicholas.

CARE OF BURNS.

In no other instance is presence of mind so necessary and common sense so valuable as in case of fire. In the small beginning a rug or heavy curtain can smother and extinguish the growing flames which in a moment more will develop and destroy. The skin is the external lungs of the body, and if the fire is not quickly smothered, the person cannot live. The excruciating pain of a burn calls for immediate attention. Cover the surface with a thick layer of cotton or a compress, and saturate it with water and alcohol, equal parts, until the pain has subsided. This will often prevent the formation of blisters. To exclude the air is the first endeavor. If the clothing adheres to the flesh after a burn do not attempt to remove it, but cut it away, and try afterward to clean the part of what is left by lifting the water drip on it and wash it away. The best dressing there is for a burn is what is known as carbol oil. It consists of equal parts of lime-water and linseed oil. Soft rags, as cotton flannel or lint, should be dipped in this and then applied over the burn. Over this should be placed a layer of absorbent cotton, then a bandage applied. If the burn is very deep it should be dressed daily, otherwise every other day is sufficient. If blisters have been formed before the dressing is applied, the water should be let out by opening them near the lower border with a needle.—Harper's Bazar.

PICKLED APPLES—Peel and core them and steam until tender. Prepare a syrup of three pounds of sugar to one quart of vinegar, add spices (cinnamon, cloves, and a bay leaf). Add the apples and allow them to simmer for two minutes and then put in jars and seal.

# Poultry

THE MISSOURI POULTRY INDUSTRY.

Secretary Geo. B. Ellis of the Missouri State Board of Agriculture has done the poultry raisers of Missouri a good service in devoting the November bulletin of the Board largely to the poultry industry. Among the subjects presented are the following: Relative Importance of the Poultry Industry in Missouri; Poultry on the Farm, by Henry Steinmetz, President Missouri Poultry Association; Profits in Poultry—How to Increase Them, by C. W. Nuss, Secretary Missouri Poultry Association; Why Should Farmers Raise Poultry? Instead of Scrubs, by Dr. J. H. Casey. Descriptions of the various breeds of poultry are given, also test of Missouri poultry breeders.

These bulletins are sent free on application to Secretary Ellis at Columbia, Mo.

BE UP TO DATE.

It would do the keeper of any sort of poultry or stock incalculable good to attend at least one of the leading fairs each year just to see what infinite care the best fanciers give their fowls and quadrupeds. The keeping of standard specimens in show condition is not entirely or even largely a matter of big feeds, but rather a variety of light meals given with utmost regularity and solicitude for the animal's appetite and digestion. Many farmers all over Tennessee are giving their scrubs as much; still their flesh is thin, hide rough and tight. Why? In the first place a considerable part of what goes out of the feed bin never reaches any beast's stomach. It is scattered from broken feed troughs and boxes all over filthy stalls or left in them to sour or to be nosed over till sickened on it. Worse still, where the most perfect system and order must be persistently practiced for satisfactory results, the utmost possible irregularity is commonly found. Sometimes times are fed twice a day—often only once. Occasionally the owner sees some fat stock elsewhere or reads a strong article in favor of good feeding, then he orders things which are unreasonable in amount and of short duration. It's either a glut or famine with all kinds of stock on the average Tennessee farm, unless it be the working horses and mules. So the digestive apparatus, and through it, the whole body is continually out of order. One week finds them with empty paunches and on the verge of "hollow-horn" or "hollow-tail." Another they gorge themselves with colic and other ailments. It will likely take a month or longer to recover from. Good feeders are, if possible, scarcer in the South than good stock. "MAPLEHURST," Russellville, Tenn.

HOW TO GET EGGS.

Henry M. Ladd, a prominent poultry raiser of Cleveland, Ohio, discusses the question of egg-producing in the "American Poultry Journal." He says the first question to arise is how and where the laying stock is to be procured and what the breed shall be. The question of breed is one open to debate. Every breeder has an opinion of his own regarding what he considers the best. Mr. Ladd says that on his farm he has White Leghorns, Brown Leghorns, White Wyandottes, Barred Plymouth Rocks, Black Minorcas and Buff Cochins. These, omitting the last, are supposed to be the principal champion laying breeds. He argues that taking all things into consideration—the amount of food consumed, the effect of cold weather, the ability to stand housing and the egg yield for the entire year—the preference stands in about the following order: White Leghorns, White Wyandottes, Buff Plymouth Rocks, Leghorns, Barred Plymouth Rocks, Black Minorcas and Buff Cochins. It is a settled question, he thinks, that the White Leghorn is the great egg producer as regards size, quality, weight and number of eggs. Unlike other breeds, the nearer the egg-laying type the White Leghorn is bred the better layer it becomes. To produce good layers care must be bestowed. They must come of brood-laying stock and be hatched out early enough, but not too early. They must be strong and vigorous from having farm range when young and growing. Some people who go into this business think they will buy as many eggs as are necessary and hatch out their own fall and winter layers. They wait until the season is pretty well advanced and then think they can hatch out just what they need for fall and winter when eggs are scarce and prices high. About the first of May they wake up and begin hatching. When fall comes, say in the month of October, the pullets look as if they were about to lay, but they do not; nevertheless they keep on eating. November comes and still they do not lay, although looking as if they would. They continue eating, however, until away in January, and then you get tired waiting, blaming the pullets and condemning the whole business. Then about the time eggs begin to drop in price, the pullets have about made up their minds that it is time for them to lay. When you figure out how much it has cost you to feed those birds you conclude that it does not pay and you say that egg farming is not what it used to be. But the time is to blame, not the business, nor the pullets, nor anything else. He didn't start right, and starting right is the main thing. When the fall comes the egg farmer whom we are trying to picture feels that he cannot induce his pullets to lay because they were not hatched out early enough, and in sheer desperation he looks around to find some one who will stock him up with fall layers, but all the other are as short-sighted as himself. Should any of them be found to possess fall layers they would be disposed of them, as they are too valuable then.

Having obtained your laying stock the next thing is to persuade it to lay and this is done by using enough of the right food, but not too much, allowing plenty of exercise, supplying fresh air, pure water, warm but not heated rooms, plenty of room, no crowding, and when this is all done you may be sure the hen is ready for business and will attend to it in no uncertain way.

The best eggs for the market are those that are non-fertilized, because they contain no germ of life and consequently cannot easily decay. If left a long time they will merely dry out a little. When eggs are put up for market, nest boxes should be used. Any little specks of dirt should be wiped off when the eggs are gathered. In this way they will bring a fancy price, and no longer will the question be asked, "Does it pay?"

**60 DAY Offer**

**2.95**

**ANALYST**

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## EYE AND EAR.

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## THE MICHIGAN STATE SHOW.

Every breeder of fancy and thoroughbred poultry in the state should remember that the state show is held in Battle Creek, commencing Jan. 7, 1902.

Every breeder in the state should bear in mind that the Michigan State Poultry Association and the Michigan Poultry Association join forces, and will hold what Battle Creek never fails to hold, the largest and most enthusiastic show in the state.

Every breeder in the state should bear in mind that a winning at Battle Creek is worth more than it would be at all the other shows in the state.

Every breeder should bear in mind the fact that the state show at Battle Creek will be judged by James A. Tucker and Sharp Butterfield, and that a score by either of these gentlemen is valuable all over the United States.

Come to Battle Creek, January 7, with your birds, and see the best, largest, and most enthusiastic show in the state.

W. R. WOODEN.

READ MRS. JOHN L. GAISER'S announcement on our poultry page and write her for prices. Her birds are in fine condition this fall, they have farm range and show much improvement over last year. Mrs. Gaisher has one 40-pound yearling tom for sale. He scored 98 and first premium at E. I. P. Show as cockerel.

THE CHRISTIAN COUNTY, ILL., Poultry and Pet Stock Association will hold a poultry show at Palmer, Ill., Dec. 28-29. Mr. C. D. Simpson of Palmer, Ill., is the secretary of the association.

HOW TO GET EGGS.

For egg production pullets and hens two years old are best. Three year old hens sometimes pay, but not always.

In selecting fowls to winter, keep one drake for every five ducks, one tom for every ten turkeys, and one cock for every dozen hens.

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ON BROADWAY, cor. LOCUST STREET

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25 CENTS TO \$10,000.00

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ON BROADWAY, cor. LOCUST ST., ST. LOUIS

## The Markets

**WHEAT**—Cash Market—By sample net on trk. No. 2 red sold at 81c this and E. side, and No. 2 red at 80c; No. 4 quotable at 77 1/2c; No. 4 hard sold at 76c; No. 3 hard sold at 75c; No. 3 hard sold at 74c.

**CORN**—Cash Market—From store new No. 2 sold f. o. b. at 67c. By sample new No. 2 sold at 66 1/2c E. to 66c this side; No. 3 at 65 1/2c E. and 65 1/4c this side; No. 3 yellow at 65 1/2c E. and 65c this side; No. 2 yellow at 64 1/2c E. and 64c this side; No. 1 at 64 1/2c this side; No. 2 white at 67c this side; No. 3 white at 66 1/2c E. and 66c this side; white ear at 65 1/2c to arrive E. side.

**OATS**—Cash Market—By sample No. 2 sold at 46 1/2c this side and No. 2 Northern at same price; No. 3 quotable at 46c; No. 2 white sold at 47 1/2c; No. 3 white at 46 1/2c; No. 4 white at 46 1/4c.

**RYE**—No. 2 switched at 60c; No. 3 at 60c. **BRAN**—Held at 11c this side and 10 1/2c E. side for large and 10 1/4c in 100-lb. sks.; bran sells at 10c at mill.

**SHIPSTUFF**—11c @ 10 this side; at mill \$1.15 @ 1.10; mixed feed, in 100-lb. sks., at 11c.

**HAY**—Prices E. trk. as follows: Timothy \$14.50 for choice, \$12.50 for No. 1, \$12.00 for No. 2; clover \$11.00 for No. 2 and \$10.50 for No. 1; clover-mixed ranges at \$10 to \$12; prairie this side \$14 for choice and \$13.50 for No. 1 and \$13.00 for No. 2; alfalfa \$11.00.

**PRICES ON CHANGE.**

The following tables show the range of prices on future and cash grains:

	Closed	Range	Closed
	Saturday	Yesterday	Yesterday
Wheat—			
Dec. ....	77 1/2 a	79 1/2 a	79 1/2 a
May ....	79 b	80 b	80 b
Corn—			
Dec. ....	64 1/2 a	64 1/2 a	64 1/2 a
May ....	66 1/2 a	66 1/2 a	66 1/2 a
Oats—			
Dec. ....	44 1/2 a	45 1/2 a	45 1/2 a
May ....	45 1/2 a	45 1/2 a	45 1/2 a

Cash wheat, corn and oats ranged:

	Yesterday	Saturday	Yesterday
Wheat—			
No. 2 red....	81 1/2	82 1/2	82 1/2
No. 3 red....	79 1/2	80 1/2	80 1/2
No. 4 red....	77 1/2	78 1/2	78 1/2
No. 2 hard....	76 1/2	77 1/2	77 1/2
No. 3 hard....	75 1/2	76 1/2	76 1/2
No. 4 hard....	74 1/2	75 1/2	75 1/2
Corn—			
No. 2 mixed....	64 1/2	65 1/2	65 1/2
No. 3 mixed....	63 1/2	64 1/2	64 1/2
No. 4 mixed....	62 1/2	63 1/2	63 1/2
No. 2 yellow....	65 1/2	66 1/2	66 1/2
No. 3 yellow....	64 1/2	65 1/2	65 1/2
Oats—			
No. 2 mixed....	44 1/2	45 1/2	45 1/2
No. 3 mixed....	43 1/2	44 1/2	44 1/2
No. 4 mixed....	42 1/2	43 1/2	43 1/2

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